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BALTIMORE, JANUARY 25, 1895.

THE MANUFACTURERS' RECORD regards as one of the most hopeful indications of the South's future the attention that is being given to the business interests of this section by leading Northern and Western papers. Heretofore the South has had more attention than it needed or desired from a sensational point of view, and every item that could be turned into a sensation has been eagerly sought by some outside papers. Fortunately, however, it is the business interests of the South, the wonderful industrial and agricultural capabilities of this section, that now command attention. One excellent illustration of this is in the special Atlanta edition of the Chicago Herald. The facts presented in that issue doubtless proved a surprise to many of the readers of the Herald, and gave them a new conception of the South's future.

MR. T. N. BARN, of the English-American Loan & Trust Co., of Atlanta, Ga., in writing about the pamphlet "Facts About the South," recently issued by the editor of the MANUFACTURERS' RECORD, says:

The writer has read your pamphlet some five or ten times, and unhesitatingly pronounces it the most perfect epitome of the South's past and present in existence. The South owes you a debt of gratitude for the wonderful statistical information you have got up, to say nothing of the defense of our institutions generally. We heartily congratulate you.

We look for the spinning industry to double in the cotton belt the coming three years.—Clapp & Co., Bankers, New York.

If this should prove true it would require the investment of \$100,000,000 in new mills in three years and the addition of 3,000,000 spindles. That is probably a little too much. The South will be content with something less than that.

THE New York Herald is publishing a series of articles pointing out the enormous increase in the world's gold production now going on, indicating, as it says, a new "golden age," in which the superabundance of gold will bring about a great increase in values of all kinds. This means increasing prosperity for the world, and especially for the South.

A Big Corn Crop in the South in 1895 Is Essential.

The MANUFACTURERS' RECORD wishes to invite attention to the following facts:

The total production of corn in the United States in 1894 was 1,212,000,000 bushels, a decrease of over 400,000,000 bushels as compared with 1893, and a decrease of 850,000,000 bushels as compared with 1891. Fortunately the South had a large crop this year, or otherwise it would have had to purchase its corn at a very high figure, because of this great shortage. As the average crop of the United States for some years has been about 1,750,000,000 bushels, the production of the last two years is over 500,000,000 bushels short of the average. The country will therefore enter upon the next crop year with a very small stock of corn on hand—so small, indeed, that even should we have another 2,000,000,000-bushel crop, as in 1891, it would require all of this enormous yield to make up for the deficiency of the last two years. Even should such a crop as this be produced, prices would probably still be high, because of the decrease in 1894. Another small crop following the one of last year would necessarily mean exorbitant prices for corn.

Because of these facts it becomes more imperative than ever before that the South should increase its corn acreage this year. The South's large crop last year was due more to a heavy yield per acre than to a large increase in acreage. If this section is to maintain its independence of the West so far as corn is concerned, every effort should be made to urge upon farmers the importance of planting a larger acreage this year than ever before. With a big corn crop the South is better prepared to stand low-priced cotton than it could in any other way.

It behooves every trade organization in the South and every business man individually, as well as the press, to persistently exert all possible influence to encourage an increase of acreage in corn and other food supplies.

If the vigorous work of the press is supplemented in this direction by the active personal co-operation of bankers, business men and all others who deal with farmers, it will be possible to secure an increase of 25 or more per cent. in the acreage devoted to corn and foodstuffs compared with last year.

The vital interest which the entire South has in the increase of its grain production, which also means an increase in the supply of provisions, prompts the MANUFACTURERS' RECORD to press this matter upon the attention of every man in the South.

ANNISTON, ALA., has the "Hot Blast," which for a unique newspaper name has been considered as taking the lead in the South, but Welch, W. Va., now

comes to the front with a paper known as the "Tug River Tug," which is advertised "as tugs for all at \$1.50 per annum." The MANUFACTURERS' RECORD extends its compliments to the "Tug," which boasts that it is "published in the greatest mining region on earth."

Pensacola Chamber of Commerce and the Nicaragua Canal.

At a meeting of the Pensacola Chamber of Commerce, called to take action relative to the Nicaragua Canal bill, now before the Senate, the following resolution was unanimously adopted:

Resolved, That the vice president and secretary of this Chamber be instructed to telegraph to Senator Pasco, protesting in the name of the Chamber and the people of Pensacola against his position on the Nicaragua Canal bill, now before the Senate, and demanding his support of the bill in the interest of the whole country, and especially of the State of Florida, which will be its chief beneficiary.

If every trade organization in the South would take such vigorous action as this we might hope to see this bill, so important to the South, passed. The South has this matter in its own hands, and yet there is danger of its own representatives defeating a measure that would be fraught with such tremendous results to this section.

Wants Letters Answered.

A dispatch from Austin, Texas, says:

The most novel bill on record was today introduced in the house of the Texas legislature by Representative Seabury. It provides that any person in this State who receives a letter from anyone and fails to answer in ten days shall be subject to a fine of \$1000, or a year in the county jail, and in aggravated cases both penalties shall be enforced.

This might not be constitutional, but it would be almost excusable. It is to be regretted that the business people of the South as a whole give less attention to replying to business letters than those of any other section of the country. In matters relating to their own interests, even with stamped envelope enclosed, thousands of them utterly ignore the courtesy of replying to letters. The MANUFACTURERS' RECORD has probably received from Northern and Western people more complaints against this habit than against anything else relating to the South.

A DISPATCH from Waco states that the Bessonet Cotton Compress Co., of that place, has awarded a contract to the Kingsland & Douglass Manufacturing Co., of St. Louis, to build at Waco a complete Bessonet plant, including a large ginning and compressing outfit. Every modern improvement for ginning and handling cotton will, it is said, be included in the plant, which it is reported will cost about \$25,000. This Bessonet cotton-baling system is the one to which the MANUFACTURERS' RECORD has repeatedly referred as promising to work a revolution in the

system of handling and compressing cotton, if all that is claimed for it by high authorities like Mr. Edward Atkinson be fulfilled.

The Value of Good Roads.

At the meeting of the Virginia State Good Roads Convention, Mr. Joseph Bryan, one of Richmond's progressive millionaire business men, was elected president. In accepting the office Mr. Bryan, referring to the movement of settlers from the Northwest to the South, said:

If the association could make it appear that the State was alive to the importance of good roads, and that it intended to make them so good as to command attention, it would then be possible to bring many farmers direct to Virginia. All the questions of civilization, advancement and improvement are wrapped up in the good-roads movement.

Mr. Bryan's statement is correct. To solve the question of good roads would be to solve many questions pressing for an answer upon the American people. Good roads would enhance the value of all agricultural property, would improve the financial condition of farmers, would stop the tendency to leave farming life for city pursuits by making farming more attractive, and increasing the social, educational and religious privileges of country life. By doing this good roads would bring about a new period of prosperity to the country at large.

A Southern Gun Plant.

A dispatch from Middlesborough, Ky., says:

Twenty thousand dollars' worth of new machinery has arrived from Boston for the South Boston Iron Works, and the plant will soon start up. It is the only gun and ordnance plant in the South, and employs 500 skilled workmen.

This is a little off. The MANUFACTURERS' RECORD understands that this machinery was secured to complete the outfit of this great plant, which has cost nearly \$400,000. Experts say that these works are not equalled in many respects anywhere else in the South, but they will probably not be ready to go into full operation for some little time yet, and when they do, it will be on general foundry and machinery business, from small work up to the heaviest handled in the South, rather than on gun and ordnance work. This plant may employ "500 skilled workmen" when it gets into operation, but to say that it "employs" them is premature.

THE presidents or other officers of a number of Southern railroads have written letters to the *Southern States* magazine discussing the subject of immigration to the South in its various phases. These letters are published in the January number of the magazine.

THE report of the State mine inspector for Alabama shows that 4,246,736 tons of coal were mined in 1894, and that 9280 men were employed in the industry.

COTTON MANUFACTURING FROM A NEW ENGLAND STANDPOINT.

A Review of Conditions North and South.

Plain Talk by President Lovering, of the Arkwright Club, of Boston.

Some months ago Mr. W. C. Lovering, president of the Arkwright Club, of Boston, which represents all of the large New England textile manufacturers, went South and made a careful study of the cotton-manufacturing advantages of this section. As was stated at the time in the MANUFACTURERS' RECORD, Mr. Lovering, in a brief interview, expressed his conviction as to the South's ability to manufacture fine goods. When he returned to Boston he was invited by the New England Textile Club to read a paper on "Cotton Manufacturing in the South." This address has never been made public before. At the time of its delivery the MANUFACTURERS' RECORD, hearing of it, asked the privilege of publishing it, knowing that Mr. Lovering had prepared a very careful statement of the relative advantages of the two sections, but not until this week was permission secured from Mr. Lovering for the exclusive publication of this very important paper. To say that it is calculated to awaken new interest in the cotton-manufacturing capabilities of the South is to put a very mild estimate upon its value. The MANUFACTURERS' RECORD commends it to the attention of its readers as one of the most important statements that has ever been made by a New England cotton manufacturer on the relative advantages of the South and New England in this industry.

Mr. Lovering said:

The advance of cotton manufacturing in the South has come to be a matter of special interest to the New England manufacturer. The time was when very little thought was given to it, and the subject was not infrequently dismissed with a sneer, as though it were an impossibility that any very material success could ever be attained. All this is changed, and we have come to realize that the South has entered the race in earnest and to stay. Henceforth, as between the East and other sections of the country, it must be "the survival of the fittest." If by the fittest we could confine ourselves to the pluck, energy, skill and business habits of our New England people, we might hope to win, but, unfortunately, these qualities are in a sense migratory, as the people possessing them are attracted to other fields where natural advantages outweigh all other considerations. In our endeavor to answer the question, whether Southern competition in cotton manufacturing is likely to prove serious, we must approach it with our minds free and untrammelled by preconceived notions. We should weigh fairly and justly the advantages and disadvantages of the different sections. Before the war the Southern mills were, to all intents and purposes, merely the graveyards of antiquated and worn-out machinery from Northern mills. The goods manufactured in these mills were of the coarsest, rudest sort, and were almost entirely consumed within the immediate vicinity, or at all events, few of them ever found their way out of the Southern States. While this condition of things remained there was no apprehension in the minds of our Northern manufacturers of any serious competition from that quarter. This is all changed. We find mills in the South today that will compare favorably with our New England mills, equipped with the latest new and

improved machinery, planned and engineered by our best Northern millwrights, and in every respect hung up to do their work in the cheapest and most approved manner, in many cases built by Northern capital, officered by Northern men, and making goods to be sold in the Northern market in direct competition with our own. It has long been conceded that within the lines of certain coarse and medium numbers the advantage is with the South, and Northern manufacturers have comforted themselves with the statement that the manufacture of the finer and finest goods would remain with them, and that these could not be made at the South. Here, again, I think we are mistaken, as I will endeavor to show a little later on. But, for the moment, allowing that these finer goods cannot be made in the South, are we to content ourselves with this field only? Are you aware how small a part of the cotton goods consumed in this country, whether of home or foreign make, are what may be properly termed fine goods? I cannot say exactly what it is, but I had occasion a few years ago, when discussing the subject before a labor committee of the legislature, to look up the matter, and I found that hardly 10 per cent. of all the cotton goods consumed in this country were what, under our standard or the English standard, are termed fine goods. All goods made from yarns of 32 and under are classed as coarse goods, from 32 to 50 medium goods, and 50 upward as fine goods. In England the range is somewhat finer. If, then, we are to confine ourselves to making only these fine goods, it follows that sooner or later our coarse-goods mills will become idle, and as fast as they need renewing, the chances are that the renewal will be somewhere in the South. But is it a fact that even the finest goods cannot and will not be manufactured at the South? I am not prepared to say that they will or will not ultimately be made there. The average number of yarn spun at the South has been growing finer year by year. The average number of yarn in 1887 and 1888 was 13½; the average number of yarn in 1892 and 1893 was 15 7/16, about two numbers finer. This may not seem to many as going very fast in the direction of fine numbers, but it shows the tendency; and we must bear in mind that where manufacturing is once firmly established, it is only a matter of a short time when the labor employed will improve in skill and adapt itself to the finer work. Fine yarns are already spun in the Southern mills, and there seems to be no good reason why as fine yarns may not be spun there as in any other section of our country. Of course, when it comes to spinning the finest yarns, an artificial atmosphere is necessary. Such conditions are attained at the cost of great personal comfort to the workmen. It matters very little what the natural climate is when you are going to do very fine work. Whether North or South, East or West, the atmospheric conditions must be affected by artificial means. It is not fair, therefore, to take into account these excessively fine numbers when weighing the advantages of either section for all ordinary numbers.

One of the first advantages claimed for cotton manufacture at the South is nearness to the cotton-fields. It is unquestionably an advantage, but it has its qualifications. Manufacturers using the cotton hauled in from the neighboring country in uncompressed bales must take just the cotton that is offered, and must buy it when the planter wants to deliver it, or else he

must go, perhaps, a long way to a large shipping town, and in that case he pays higher for his cotton, and pays the local shipping charges, which are large. In other words, we at the North have a larger and better market from which to select our cottons than the Southern manufacturer. We can buy in large lots and of more even-running grades.

In the matter of coal the South has an indisputable advantage. New England must bring all her coal from an average distance of 500 miles, and for purposes of power and heat our requirements are much greater per 1000 spindles than in the South. We have long since outgrown our water-powers, and are dependent largely upon steam-power. Many of the Southern States do not go beyond their borders for their coal, and it is of a very superior quality, and at half the price that is paid at the doors of New England mills. There are at the South enormous unoccupied water-powers, which are offered to Northern capital upon the most attractive and alluring terms.

Our climate in New England compels an immense consumption of coal for purposes of heat alone not only in our mills, but in our homes. The milder climate of the South enables all classes to live with less cost for shelter and raiment. Our ice-bound rivers with anchor frost are unknown to the millmen of the South. The average work-day at the South the year round has more of daylight than at the North. While they never have the long days that we have in summer, they do not have the extremely short days that we have in midwinter.

Freedom from legislative restrictions with regard to capital and labor is another and important advantage in the South. Eleven hours constitutes a day's work in most of the Southern States, and in some States factories are run twelve hours. Such has been the improvement in machinery within the last fifteen years that less skilled operatives than formerly are required to do the same work, and the fatigue and burden of such work are also greatly diminished, so that eleven hours today does not bear as heavily upon an operative as ten used to. A mill in the South running sixty-six hours per week for fifty weeks in a year runs 3300 hours. A mill in Massachusetts running fifty-eight hours per week for fifty weeks in a year runs 2900 hours, a difference of 400 hours a year in favor of the Southern mill, equal to seven weeks of fifty-eight hours; or, in other words, the Southern mill runs nearly 14 per cent. longer than the Massachusetts mill, and when to this advantage is added the fact that wages for the sixty-six hours in the South are on the average 35 per cent. less than for the fifty-eight hours here, some idea can be formed of the overwhelming odds with which we have to contend.

The recent census report gives the average wages of men in the cotton industry of New England at \$7.82 per week, and in the Southern States \$5.49, or about 30 per cent. less in the Southern States; the average wages of women \$5.74 in New England and \$3.71 in the South, or more than 35 per cent. less in the Southern States; average wages of children in New England \$3.71 per week; average wages of children in the Southern States \$1.87, or about 50 per cent. less in the South than in New England. This accords very nearly with the figures that I have been able to get from mills in the South. I will say incidentally that the wages in Pennsylvania are higher per capita than in New England, but this is accounted for by the fact that the proportion of looms and knitting machines to the preparation and spinning machinery is very much greater than in any other section of the country, and it is well understood that these require more skilled and better paid labor.

I presume that many of you gentlemen

are familiar with the relative cost of mills at the North and South. I will, however, give you some of the results of my own investigation.

Two mills of the same size, construction and equipment to do the same work, one in New England and the other in the South, will cost about the same, so far as the buildings and machinery are concerned. The buildings will cost less and the machinery more in the South than in the North. In South Carolina, Georgia and Alabama lumber planed and ready for building can be had from \$8 to \$10 per thousand, which will cost here in New England from \$20 to \$22 per thousand. Brick laid up cost in the South \$7 to \$9 per thousand; the same here in New England costs from \$12 to \$15 per thousand. A mill which costs in New England eighty cents per square foot of floor space can be built in the South for sixty cents per square foot. There are some places in Georgia where good planed lumber can be had for \$5 per thousand, but this is in out-of-the-way places where transportation on other materials would more than offset the low cost. In locating a new mill in the South there are many things to be considered—proximity to a good cotton-growing region, transportation, water for purposes of power or steam, and, if possible, a neighborhood that will provide labor, although the last consideration is of less importance, if a large mill is projected with all the necessary auxiliaries and accessories.

There are mills in Georgia which have many thousand acres of land and own and control everything about them. They have their own houses, churches, schools and stores, where everything is kept that their work-people can by any possibility require, from swaddling clothes to grave cloths, and even coffins in full sight on upper shelves. It is in fact an autonomy. Machinery costs from 15 to 20 per cent. more than at the North, on account of transportation and extra expense in setting up and keeping in repair.

The houses in which the work-people live are very inexpensive; a house with from three to five rooms, without any cellar, costs from \$200 to \$300. Formerly it was the custom to give the rent, but latterly a rental has been collected that pays a handsome return on the cost.

We hear a great deal about extraordinary advantages that are offered to Northern capital in the way of immunity from taxation for a period of years. This is of doubtful value. There is no State where they can free you from State tax. You may in some States be exempted from a town or local tax, but even this may ultimately result in a disadvantage, as the location and the stipulations of your occupancy may be such as to inure to your injury. The best way is to be independent; look about and determine what will be the most desirable location, all things considered, and drive the best bargain you can for what you want. It may result in a practical deed or gift of the land you require, but do not bind yourself to any onerous terms. It is better to locate outside of town limits, as there is only a State tax to be paid upon such land in most of the Southern States.

Still another advantage that the Southern manufacturer possesses is the support he receives from the railroads. The attitude of the Southern railroads toward their local industries works to their help and to our injury. The classification of freights discriminates against Northern manufacturers. For instance, finished cotton goods are transported to the North as fifth-class freight, while cotton is transported between the same points as third-class freight and bears a higher rate than the finished goods. When remonstrated with for this discrimination they state very frankly that it is their purpose to foster and encourage their home industries. It is to be hoped

that some day this may be changed, as no doubt it will. For the present, however, it operates to the disadvantage of the Northern manufacturer.

There are not wanting those who profess to disbelieve all that is said of Southern manufacturing and affect to despise all efforts in that direction. However, they cannot shut their eyes to the very significant increase of spindles in the South during the last decade, or to the largely increased consumption of cotton during the same period.

The most interesting phase of the whole subject relates to the change in character and habits of the Southern people. Since the war and the abolition of slavery there has taken place a very marked and significant change in the white population of the South. Before the war it was common to speak of the poor whites as "white trash." We no longer hear this term. The day that emancipated the slave freed this class of white people from a certain ostracism that had come to be almost a dominating principle of the Southern oligarchy.

Several causes operated to bring this about. In the first place, the white trash, as they were then called, were enlisted into service in the war, and it was found that they made good fighting material. Until the war many of these people had never done a full day's work in their lives, content to let the negro work, and barely supporting existence on such crumbs as they could pick up from the hospitable tables of the naturally generous slaveholders. Military life in the Southern army was by no means an idle life. It was even more active than in the Northern army, and the training, drilling and disciplining that the men were subjected to gave them a new idea of life. After the war it became necessary for everyone to work—to do something to obtain a livelihood. Class distinctions were more or less obliterated. At all events, people were more on a level than ever before, being every one obliged to labor. This had the effect to bring the people more together, and they gradually became more industrious and thrifty. They took on Northern methods and Northern habits, and when cotton-manufacturing became established in their midst they were found to be well adapted for mill-workers. The truth is, the white population of the South has improved wonderfully in its general character and usefulness since the war. Men who never did a stroke of work were only too glad to get some work to do, often the most menial.

I found at Fortress Monroe last spring that the very best class of young men who offered for enlistment in the United States army came from North Carolina. They seemed only too glad to enlist for \$13 a month. I mention this as showing that there is a large population at the South eager and anxious to work. The class of help at work in Southern mills today is as good as can be found in the whole country. They are native Americans, with but few foreigners among them. The presence of the negro in the South has always operated to keep away foreign immigration. The South is in this sense really more American than the North.

According to the last census the population of Massachusetts was 2,238,943, of which 657,137 were foreign-born, or about 30 per cent. In Rhode Island it is 34 per cent. of foreign-born; in Maine, 12 per cent.; in New Hampshire, 19 per cent.; in Connecticut, 25 per cent.; in New York, 26 per cent.

In the principal manufacturing States of the South it is as follows: Georgia, with a population of 1,837,353, has only 12,137 foreign-born, or only about 6½ per cent.; or reckoning on a basis of the white population alone it is only 12 per cent. foreign-born. In South Carolina it is only 5½ per cent. foreign-born, or reckoned on a basis of the white population alone it is 13 per cent.

foreign-born. In North Carolina it is about 2.30 per cent. foreign-born, or reckoned on a basis of the white population alone it is 3½ per cent. foreign-born.

Now what does this mean to us? I do not say that all of our foreign population is to us a handicap, but it does mean that every month sees thrown upon our shores a large number of the criminal, pauper and insane classes that at once become a burden and a tax upon our community. There are between 6000 and 7000 insane inmates of our Massachusetts hospitals, and of this number 60 per cent. are foreign-born. In our prisons, jails, reformatory institutions and almshouses the percentage is still larger. Now, all this tells against us when we pay our tax bills. Taxes in the Southern States are not half what they are with us.

It has been found that Southern men are more desirable and efficient as superintendents and overseers than men brought from the North. They seem to understand and control the operative better than Northern overseers. A native American overseer is more acceptable to them than a foreigner.

It has been asked, and very properly, too, if these are the advantages of cotton manufacturing in the South, what are the advantages remaining to us in the North? In the first place, we have the advantage of establishment, which may be termed the prestige of priority. This is a tremendous advantage, and if we are not legislated out of it we shall hold it for a long time yet by sheer force of New England pluck and determination. Furthermore, we have a more comfortable climate to live in and one more conducive to physical exertion than that of the South. Then, again, we are the largest consumers of our own products. In fact, New England is a larger consumer per capita of all the products of the country, whether agricultural or manufactured, than any other section.

In summing up the whole question, I think we will find that it is no longer any use for us to underestimate the Southern manufacturer. Of course, wherever manufacturing is done it is becoming a closer and closer competition day by day, requiring the practice of infinite economy in every department. A print-cloth mill built in every way upon the model of the best print-cloth mill in New England would, in my judgment, be able to turn out a regular 64-inch square print cloth in the South at about two and one-quarter mills per number for everything above cotton. In fact, in South Carolina today goods are placed on the cars at a cost of two and one-quarter mills per number for all expenses over and above cotton.

It may be only a matter of time when the conditions, so far as relating to hours of labor and wages are concerned, may be equalized, but I am afraid this is a long way off, for by the time they have reduced their hours of labor to fifty-eight per week we shall have been forced down to fifty-four hours or less, and there must be almost a revolution before we shall reach anywhere near the Southern pay-rolls.

Now, what are we to learn from these investigations? It seems to me that the cotton manufacturers of New England are today in a critical condition. The tendency is away from New England and toward the South, and any legislation that stops looms and spindles in New England today for any considerable period stops many never to be started again. Now, in making these statements, I do not wish to be understood as sounding any alarm, but I think it is well for us to know what the future possibilities and limitations of cotton manufacturing are in New England.

A BOARD OF TRADE has been organized at Pulaski, Va., with Geo. M. Holstein, president; John W. Eckman, vice-president; D. D. Hull, Jr., secretary, and B. Laughon, treasurer.

Pig-Iron Production in 1894.

The annual report of the American Iron and Steel Association shows that from the extreme depression of the last half of 1893, during which period the production of pig iron was only 2,561,584 gross tons, there has been a steady recovery, the output for the first and last six months of 1894 being, respectively, 2,717,983 and 3,939,405 gross tons, making the total for the year just ended 6,657,388 tons. This is the smallest product in the past six years, as is shown by the following statement:

Years.	Gross tons.
1894.....	6,657,388
1893.....	7,124,502
1892.....	9,157,000
1891.....	8,279,870
1890.....	9,202,703
1889.....	7,603,042
1888.....	6,489,738
1887.....	6,417,148

The gain of 45 per cent. in production in the last half of 1894 as compared with the first six months of the same year is not a full measure of the increase in activity during the year, for the furnaces in blast at the close of December, as reported by the Iron Age, are credited with an aggregate capacity of 168,414 gross tons per week, which would make the production at that time at the approximate rate of 8,750,000 gross tons per year. The appended statement of the number of active and idle blast furnaces at the close of certain years, compiled from the reports of the American Iron and Steel Association, will indicate in a measure the activity at the dates mentioned:

	Active	Idle	Total
Dec. 31—1894.....	185	326	511
1893.....	137	391	528
1892.....	253	311	564
1891.....	313	256	569
1890.....	311	251	562
1889.....	344	226	570

In connection with these figures, however, it should be remembered that the number of furnaces in blast is not always a safe basis on which to judge of the quantity of production, because improved methods and more powerful machinery give to the fewer stacks of today a much greater productive capacity than was possible for a larger number a few years ago. At the close of 1888, in which year 6,489,738 tons of pig iron were made, 344 stacks were producing, and twenty-three years ago, when the output was only 2,548,713 tons, there were no less than 410 furnaces in operation. The abandonment of half a dozen old stacks is more than offset by the erection of a single modern furnace.

The pig-iron product of the past two years was contributed by the different States as follows:

States.	Gross tons	
	1893	1894.
Massachusetts.....	7,853	156
Connecticut.....	12,478	7,416
New York.....	191,115	175,185
New Jersey.....	74,305	63,273
Pennsylvania.....	3,643,022	3,370,152
Maryland.....	151,773	5,600
Virginia.....	302,859	298,086
North Carolina.....	2,843	.....
Georgia.....	39,678	40,268
Alabama.....	726,888	592,392
Texas.....	6,257	4,671
West Virginia.....	81,591	80,781
Kentucky.....	47,501	33,854
Tennessee.....	267,915	212,773
Ohio.....	875,265	900,029
Indiana.....	5,567	.....
Illinois.....	405,261	604,795
Michigan.....	117,538	95,171
Wisconsin.....	131,772	91,595
Missouri.....	32,360	6,522
Minnesota.....	10,373	.....
Colorado.....	45,555	73,669
Oregon.....	4,739	1,600
Total.....	7,124,502	6,657,388

While there was an increase of 45 per cent. in the production of pig iron in the past six months of the year, there was an increase of only about 15 per cent. in the stocks of unsold iron in the hands of producers, indicating that the increased output has gone largely into immediate consumption.

Stocks on hand at the close of former years, together with the percentage of the product represented by the unsold iron, have been as follows:

	Stocks. Gross tons.	Per ct. of prod'ct
1894.....	597,688	11.9
1893.....	662,068	9.2
1892.....	86,116	5.5
1891.....	896,133	7.2
1890.....	608,021	6.6
1889.....	247,679	3.2
1888.....	300,144	4.6

Progress of the Atlanta Exposition.

ATLANTA, GA., January 17.

Editor Manufacturers' Record:

The Cotton States and International Exposition has reached a point where the plan is practically mature, and the construction of the buildings in good time is assured by contracts under bond for the completion of the principal buildings by June 1. Attention will now be given largely to exhibits, and it is proposed to make these the best that this and other countries will afford. We have already a fair prospect for numerous exhibits by States and by foreign governments, in addition to the superb exhibit which will be made by the United States government. We have also the promise of a number of elaborate exhibits by railroad systems. Among these will be a phosphate pyramid 100 feet square at the base by the Plant system, and this structure will be finished inside in Florida woods and filled with the products of that State. The Flagler system has also promised a handsome display. Similar exhibits will be made by the Southern Railway, which will construct a building of its own; by the Louisville & Nashville system of Florida and by the Florida Central & Peninsular Railway of the same State. Georgia, Louisiana, probably Alabama and North Carolina, Tennessee, South Carolina, New Mexico, California, Illinois and most of the Southern States will be represented either officially or through private enterprise by elaborate exhibits. The Argentine government has increased its original appropriation of \$15,000 to a much larger sum.

Operative exhibits will be especially encouraged, as it is sought to make this display as largely as possible an educational one. In steam engines, for example, the object is not so much to secure mammoth machines as to make a collection of the various modern types, which will illustrate the most recent progress in this line. Another example is the chlorination plant which will be exhibited by the Mecklenburg Iron Works, of North Carolina. It will extract gold from the red dirt of North Georgia in Machinery Hall.

We have a good prospect of high-class exhibits from foreign countries. Information has just been received from United States consuls in several foreign countries indicating that the manufacturers of England, Germany and Austria will take an interest in the exposition. Especially encouraging reports have been received from Bradford, the centre of the woolen industry in England. That community has exported \$400,000,000 worth of goods to the United States within the past thirty years, and felt so assured in its trade that the manufacturers neglected to make an exhibit at the World's Fair. The Daily Argus, of that city, states that the Bradford manufacturers have suffered seriously because of this neglect, and American goods are taking the trade in this country formerly supplied by English wools. In order to repair this loss the press of Bradford is advocating a collective exhibit of textile goods, silk and wool, to be made through the Chamber of Commerce.

An interesting incident of the past week was the sending of a train of twenty-one cars loaded with provisions from Atlanta to Lincoln, Neb. This good work, suggested

by Mr. R. H. Edmonds, of the MANUFACTURERS' RECORD, and handsomely executed by ex-Governor Northen, of Georgia, will do much to increase the good feeling between the South and West. It was particularly appropriate that one carload was contributed by the directors of the exposition.

A communication just received informs me that Governor Mitchell has appointed Messrs. J. E. Ingraham and W. D. Chipley, commissioners, and S. Paul Brown, assistant commissioner, for the Florida State exhibit. Mr. Brown asks for four acres of space, and states that damage by the recent freeze is not so extensive as was at first supposed, and the recuperative power of Florida will enable her people to make an exhibit which will command the admiration of the country. C. A. COLLIER, President and Director-General.

GOLD-MINING IN GEORGIA.

Present Status of the Dahlonega District.

[Special CORRESPONDENT'S RECORD.]
DAHLONEGA, GA., January 8.

Gold was first discovered in Georgia in 1829. During the thirties the gold fever was intense throughout Northeast Georgia, and during those years stirring scenes were enacted in the town of Dahlonega, in Lumpkin county, which was the centre of operations for over 5000 miners, who were engaged in washing out gold from the gulches nearby. Like all the mining camps that have sprung into existence in the West since that time, Dahlonega's earliest days were its palmiest days.

When gold was first discovered on the Pacific slope, a regular stream of Georgia miners poured into California from Lumpkin county, and, when the war came on, Dahlonega was an almost deserted mining camp.

It was only a few years ago that this district began to retrieve its lost fortunes by attracting the attention of legitimate developers, though for years prior to that time hundreds of adventurers and "boom" companies had operated quite extensively here; in fact, to such an extent that it was well-nigh impossible to get the attention of honest investors turned this way. So thoroughly had the stock "sharks" worked the money centres of the East that to mention a Georgia gold mine with a view to getting capital interested in it was fraught with danger. But I am happy to say that a new era has dawned upon this section. The adventurers and sharks have disappeared from the field, and their places are being filled with straightout, legitimate investors and developers. More men are now at work in the mines, and more gold is being produced in the Dahlonega district than at any time in the past twelve years, and a feeling of confidence is everywhere prevalent.

The greatest interest is centred in the operations of Mr. Christian Wahl, a wealthy gentleman of Milwaukee, who a year or so ago acquired the mines and mills of the old Hand & Barlow Company. Besides these properties, he has purchased the Findley, Hedwig and Battle Branch mines, and has made extensive preparations to develop them on an elaborate scale. Altogether his investments represent an outlay of \$150,000. At the Hedwig mine he has erected a 40-stamp mill with the latest improvements, while at the Findley he has added twenty stamps, making forty in all at that mill. These stamps are kept constantly at work on surface ore that is sluiced into the mills by hydraulics. Of the old Hand & Barlow mills, six in number, the Hand and Ralston are running on full time, while the Lawrence, a 10-stamp mill, is kept busy by Dr. Weld, the assayer of the company, making tests on various ores from different parts of the properties. Mr. Wahl is going about his developments in a cau-

tious way, getting everything thoroughly systematized and introducing the latest appliances for handling his ores in the most economic manner. It takes money to do this, as well as pluck, brains and energy, all of which Mr. Wahl possesses a full share. Right here allow me to say that this is not an inviting field for small investors. The ores are low grade, with but few exceptions, and to treat them successfully requires extensive preparations, so that immense quantities of ore may be handled at a minimum cost. At the Findley mine Mr. Wahl has put in a mammoth pump to throw water on Findley mountain, where it is stored in immense reservoirs and used in sluicing the ores from different parts of the mine into the mill by means of flumes constructed for that purpose. By this means the ore can be mined and delivered into the mill at a cost of not exceeding twenty-five cents per ton; so you can readily see that under this system ores of very low grade can be mined at a profit. The equipment for handling them is expensive, but as low-grade ores in this district are practically exhaustless, capitalists who put their money in plants, as Mr. Wahl is doing, are bound to reap large returns from their investments. It is a well-known fact that the two greatest gold mines in the world today—the Homestake, of South Dakota, and the Treadwell, of Alaska—have made fortunes for their owners out of low-grade ore. What is being done at these mines can be done in the Dahlonega district with the same kind of men and energy at the helm. I predict that Mr. Wahl will make a wonderful success from his mining operations in this district, and will demonstrate to the mining world that gold-mining in Georgia is a reality, and not a myth.

Adjoining the Findley is the old Lockhart mine, which enjoys the distinction of being among the oldest in the camp, and upon which three stamp mills have been worn out crushing the ore, and yet the surface has only been scratched. Here the deepest shaft in the district, taking water-level into consideration, has been sunk; it is fifty feet deep. At that depth a tunnel was run out to tap the ore body, which varied from four to sixteen feet in thickness. This vein was drifted on for 300 feet, and the ore taken out to the top of the ground above the drift, yielding some 40,000 tons of ore that averaged \$4.00 in free gold per ton. If this vein were developed with a shaft 400 or 500 feet deep, with drifts and levels running out from it on the strike of the vein, this mine would prove, beyond doubt, a bonanza. But as such development requires capital and enterprise, I very much doubt if it will ever be done, unless Mr. Wahl or some one like him takes hold of and works it in mining-like order. At present this property, that gives such promise of development, is in the hands of lessees, who are desecrating it by "gouging" on the surface, the owner having no inclination to work it himself.

There are about 300 men at work in the mines within a radius of six miles of Dahlonega at the present time, 100 being in the employ of Mr. Wahl, and nine stamp mills, with an aggregate of 170 stamps, are running day and night. Altogether the outlook for the future is all that the friends of legitimate mining could wish for, and the present year portends to be one of unusual interest to the gold-mining industry of this district.

To men who have capital and experience this is a good field to reap good returns from investments in legitimate mining enterprises. But we want no adventurers or "boomers" to come this way, as the lesson of experience is quite enough on that line. W. G. MCNELLEY.

AN effort is being made to form a board of trade at Montgomery, Ala., to promote the general business interests of the city.

A Suggestion of Coal in South Carolina.

[Extract from a report recently made of the Limestone valley, in which Blacksburg, S. C., is situated.]

The greatest depression of this anticlinal basin will be found along the limestone formation and near the axis of the valley. This basin has in its confined limits either traces of or in workable quantities plumbago, tin ores, limestone, including both marble and hydraulic cement of best quality, argentiferous galena, iron ores, both magnetic and hematite, boundless in extent and free from sulphur, phosphorus or titanium, and gold-bearing quartz, while the diamond should be found on the itacolumitic range, and possibly oil seams, and deep below the surface seams of anthracite coal.

In regard to coal, Leiber (Geological Survey of South Carolina, 1855 to 1860) says (Vol. II, page 88) Prof. Chas. U. Sheppard, Sr., in his report of the Quinn lime quarry, on the east bank of Broad river, near the mouth of Blackrock creek, says "the entire formation is one that would be pronounced primitive, inasmuch as its origin must be coeval with that of the strata by which it is embraced, and concerning the primitive character of these no geologist can entertain the slightest doubt, and still this limestone at the Broad river contains the most decided vegetable remains." Here may be seen the impressions of the stems (with their swelling nodes or joints) of the ancient *exquisitum* (horsetails) varying in diameter from one inch up to the gigantic dimensions of eight inches. And Professor Sheppard further says: "If this unexpected discovery should be followed up by that of black carbonaceous slates, with impressions of fern leaves and other coal plants, as in the primitive region of Worcester, Mass., we should be authorized to predict the finding of workable beds of anthracite in this part of the State."

Professor Sheppard's examination and report was made in 1848. Leiber, coming after him, could not see the proofs of vegetable remains at the Blackrock lime quarries. But in the exploiting of mine No. 4 by the Magnetic Iron & Steel Co. black shales were cut, and the writer thinks, with well-defined imprints of fern leaves thereon. This mine is on the same range, but upon the top of the Blackrock limestones. If Professor Sheppard was correct, and there is no error in classifying the shales, which latter can be seen and examined at any time two miles southwest of Blacksburg, S. C., why may seams or beds of hard coal not be met with in this locality? No mining exploitations in this locality ever went deeper than sixty to eighty feet, whereas coal would, if it exists, be from 500 to 2000 feet deep. If found it will be either anthracite or Jurassic.

Specimens of Jurassic coal have been found south of the Alleghany range in South Carolina, and specimens of coal came from the foot of the mountains in North Carolina. No region of country would invite the boring tests more than this, and where such tests are made, the parties making them may likely meet with rich rewards. Much of the country is underlain with metamorphic rocks, and particles of it may be of far subsequent formation to the greater portion of the surrounding country. The party who bores here for oil and coal may be laughed at as a visionary exploiter, but the laugh may be turned if he strikes either or the stiff clays, the matrix of the South African diamond fields.

THE Business Men's Club is a recent organization in which the active and progressive citizens of San Antonio, Texas, have united for the advancement of their city's general welfare. The officers of the club are: Hon. J. L. Slayden, president; Edwin Chamberlain, first vice-president, and August Briam, second vice-president.

Our South American Letter.

[Special CORRESPONDENT'S RECORD.]
BUENOS AYRES, ARGENTINA, Dec. 5.

I arrived in Buenos Ayres a week ago, and send you letter by the first steamer, which goes by Europe.

I have found the people here deeply interested in the Atlanta Exposition, and the government has determined to take part in it, and is formulating a plan for this. There is at Philadelphia an exhibit that it had at the Chicago World's Fair, which was given to Philadelphia, but the right was reserved of sending it elsewhere for temporary exhibition, and this exhibit will be sent to Atlanta. It consists largely of the magnificent woods, minerals, etc., with which this country abounds in some of its states. Dr. Estanislao S. Zeballos, the Argentine minister to the United States at Washington, one of the ablest diplomats there, and a gentleman of remarkable accomplishments, and especially interested in trade, industrial and farm and stock matters, will be the United States commissioner.

The papers here, and they are very powerful ones, have taken up the exposition and advocated it enthusiastically. I brought letters to the government and the leaders of all parties and shades of political standing, and they have all taken hold of it with vim and interest. There is a special regard here for our United States people, and they desire closer friendship and stronger business relations with us.

The foreign trade of Argentina has run as high as \$350,000,000 a year, of which we have never been able to get more than \$20,000,000, and have now only about \$12,000,000.

We must do some things, however, that I want to impress on your readers, and wish to urge unceasingly.

We must have an American bank, and not be dependent on the European banks, which make exorbitant charges for everything. We must have direct lines of steamers, and I am glad to see by the cable that in his message Mr. Cleveland recommends repealing the law that forbids sailing our flag on ships bought out of the United States. We must build up a marine in any way.

Again, and a most important matter, our manufacturers must make goods to suit these people, like the European manufacturers do. And our merchants in the United States must give credit as the Europeans do. All these conditions are needed—banks, ships, credit and catering to tastes here—and the result will be a colossal increase of business. The field here is simply enormous for trade of every kind. This is a magnificent market.

I. W. AVERY.

Reported Coal Discovery in Mississippi.

W. L. Nugent, attorney-at-law, of Jackson, Miss., in a letter to the MANUFACTURERS' RECORD, says:

"We have had borings and partial explorations made along the projected line of the G. & S. I. R. R., and have discovered vast quantities of lignite, and think we have found coal of good quality and in paying quantities. We have undoubtedly discovered, as far as we can judge, inexhaustible quantities of brown and red hematite iron ore, which have been analyzed and compare most favorably with the best of the ores of Alabama. We have had no especial examination of the coal properties made, simply from the lack of means. We have no moral doubt but that, at varying depths, say at 275 to 400 feet, good bituminous coal will be found of large quantity and extending over considerable areas, not less than ten miles long and two miles wide. If we had the money to sink the shaft or buy a diamond drill we could soon bring this matter to a practicable demonstration. We have offered to give anyone

who will furnish us the means to secure the options and have an examination made a one-sixth interest in the property.

"I hand you the enclosed statement of the analysis made by Professor Jones of the coal found in Carroll county, which you can read, copy and return. This coal is of the lignite quality, brown in color and light. It is found in vast quantities near the surface of the ground, and the drill shows, or rather indicates, that there is a very fair quantity and quality of bituminous coal underlying the beds. We are now digging in order to verify the indications of the drill, which, in passing through the supposed coal beds, grinds the coal up into small pieces."

Two Inventions that Promise Much for the South.

[Special Corres. MANUFACTURERS' RECORD.]
RICHMOND, VA., January 21.

There is a good prospect of revolutionizing methods being introduced in two of the South's great staples, cotton and tobacco, based on inventions that promise to be of much value to the South. Investigations that I have been making lead me to believe that both will prove successful. So far as cotton is concerned, the one thing needful is an invention to make better bales with less expense to the grower. There are several of these inventions claiming to have solved the problem for doing away with the existing baling and compressing system, which Mr. Edward Atkinson calls the "most barbarous" packing known to the commercial world. The result of investigations now being made into the merits of various devices will doubtless soon result in bringing improved baling and compressing matters prominently before the country, as some leading capitalists in this country and in Europe are interested in these investigations.

In the matter of tobacco, it has been plausibly maintained that growers, leaf-handlers and venders of finished products were harassed and hampered, not to say injured, by the fact that all, or nearly all, the cigarette machines in use are controlled by a single company, which, by having virtually a monopoly of this particular tobacco product, was enabled in a measure to control makers of plug and smoking goods by dictating terms to jobbers and retailers all over the country as to what goods they should be permitted to keep in stock.

Without going into the real merits of these allegations, the public mind has been long looking for the day when inventive ingenuity should place within the reach of even the smallest manufacturer some machine which would enable him to be free from the interference of any trust or monopoly (should one exist or should one arise), by enabling him to make his own cigarettes, as well as other smoking goods and plug.

From an investigation that I have been making in Richmond, Va., it would seem that this desideratum has been provided in the Wood cigarette machine, at least in so far as concerns the making of the higher and better grades.

This invention possesses three features of cardinal merit—originality, simplicity, and inexpensiveness in construction and operation. In respect to its originality, it is given as the deliberate opinion of patent experts that there is no possibility of any pretense of infringement. In respect to its simplicity, it is not only free from complications, but when set upon a table is not very much larger than a typewriting machine. In respect to its inexpensiveness in construction, it costs only about one-tenth of what is required to build the next cheapest machine now in use, while the labor and power necessary to turn out with it any given unit of product costs less by 33⅓ per cent. than with any other heretofore placed upon the market.

Indeed, it is thought that cigarette-mak-

ing with this machine will ultimately become an adjunct of every small cigar shop in the country, as, with the Wood machine, it is possible for even salesmen and saleswomen to put in their idle time making cigarettes; as is done largely abroad, but by hand.

What the owners of the invention propose to do in the way of manufacturing or marketing the machine the writer is not advised.

THOS. P. GRASTY.

Nebraska's Need.

The following dispatch to the Boston Journal shows how much the South's aid is needed in helping the destitute in Nebraska:

"Greeley, Neb., January 20.—The distress in this part of the State is appalling. Hundreds of families having nothing to eat and no fuel, and children are so nearly naked that they are kept from school. At least one-fifth of the people of this county have become county charges, which has depleted the county treasury and depreciated county paper until it is not worth more than half its face value, and is still going down.

"It is impossible for the people to care for the destitute, and unless a large amount of outside assistance is received at once some of the worthy farmers and their families will perish. The people are in great need of clothing.

"Some of the best farmers, whose lands are unincumbered, are as destitute as tenants, because they cannot realize on any kind of securities. A great many of the floating population left the State last fall, and all who are here are actual residents, most of them owning their homes. All the hogs and salable cattle have been sold and shipped away, and the people have to depend upon charity."

The Numerous Uses of the Pine.

The January number of the *Southern States* magazine contained a very interesting article by Mr. Thomas C. Harris, of Raleigh, N. C., on the various products of the pine tree, comprising lumber, shingles, crude turpentine, spirits of turpentine, rosin, tar, pitch, lampblack, charcoal, oil from the needles, alcohol, creosote, pine-oil, fibre or pine hair, wadding, carpets, bagging, kindling, and numerous patent medicines, not taking into account the "mast" (seed) and roots which serve to fatten the swine running at large. The article is generously illustrated with fine half-tone engravings.

The Aransas Pass Harbor.

Reports in the Texas papers show that good progress is being made in the negotiations for the development of Aransas Pass and the deepening of its harbor. As recently stated in the *MANUFACTURERS' RECORD*, Messrs. Alexander Brown & Sons, the bankers, of Baltimore, have offered on certain conditions to furnish the money necessary for deepening the channel and carrying out the proposed operations of securing a deep-water harbor. If these conditions be complied with, which now seems probable, Texas will have another very important deep-water port.

Messrs. Alexander Brown & Sons are so well known throughout the financial world that it is needless to say that should they take hold of this matter, not only Texas, but all the Southwest now seeking an outlet through Gulf ports, would be benefited. As generally known, the house of Alexander Brown & Sons is the parent house of Brown Bros. & Co. and Brown, Shipley & Co., of New York and London.

THE Colgrove Transportation Co. is making arrangements to start a line of steamers between Baltimore and Norfolk on Chesapeake bay. Russell Colgrove, of Washington, D. C., is president of the company.

FINANCIAL NEWS.

American Banking & Trust Co.

A financial institution which just completed its organization in Baltimore, that starts operations under favoring auspices, is the American Banking & Trust Co. This corporation received a liberal charter from the Maryland legislature, and is privileged to do business in this and other States. Its specialty for the present will be the surety business, and later banking, safe-deposit and trust features are to be added. The company is an outgrowth of the American National Bank of Baltimore, which, although but a few years old, has, by the conservative and able policy pursued by its management, secured the confidence of the business community and experienced a notable success. The American Banking & Trust Co. has in its directory and as stockholders many prominent Baltimore business men, and in point of financial backing is amply supplied. Its officers are: John Hubner, president; Joshua Horner, vice-president, and John T. Stone, secretary-treasurer. The capital stock is \$200,000, all of which has been subscribed and 50 per cent. paid in.

New Financial Institutions.

A building and loan association is being organized at Yorkville, S. C., by J. F. Hart and others.

Bank of Slater, Mo., has been incorporated by R. W. Bourne, C. B. Rodgers, N. N. Fry and others. The capital stock is \$50,000.

The Bank of Merwin, of Merwin, Mo., has been incorporated by R. S. Catron, G. W. Lee, James C. Martin and others. The capital stock is \$10,000.

The Shannon County Bank of Birch Tree, Mo., has been incorporated by C. M. Richards, T. E. Austin and W. F. Cook. The capital stock is \$100,000.

The application of W. B. Prickett, of Bluefield, W. Va., and associates to organize the Bluefield National Bank has been approved by the comptroller of the currency.

The Great Eastern Building Association of Highlandtown, a suburb of Baltimore, has been chartered by Charles Myer, Ludwig A. Schroeder and others. The capital stock is \$520,000.

The Bank of Seneca, S. C., has been incorporated by M. W. Coleman, H. J. Gignillat and G. W. Gignillat. The capital stock is \$25,000, with the privilege of increasing to \$50,000.

The Mercantile Guarantee, Building & Loan Association of Kansas City, Mo., has been incorporated by W. J. Anderson, H. H. Noland, L. M. Miller and others. The capital stock is \$2,000,000.

New Bond and Stock Issues.

The Dallas Terminal Railway & Union Depot Co., Dallas, Texas, will issue \$500,000 of bonds.

Green Cove Springs, Fla., will apply to the legislature for authority to issue bonds in amount to not exceed \$50,000 nor less than \$30,000 for improvements. Christian Black is mayor.

The Consolidated Gas Co. of Baltimore has sold to a syndicate \$893,000 of its 5 per cent. bonds for the purpose of providing funds to retire a like amount of Equitable 6 per cent. bonds.

Interest and Dividends.

Illinois Central Railroad Co. has declared a semi-annual dividend of 2½ per cent.

Blackwell's Durham Tobacco Co. has declared a semi-annual dividend of 3 per cent.

Nashville, Chattanooga & St. Louis Railway Co. has declared a dividend of 1 per cent.

The Canton Co. of Baltimore has declared a dividend of \$15 per share. After

paying this dividend, the company will have a cash surplus of about \$300,000.

The Monticello Wine Co., Charlottesville, Va., has declared a dividend of 6 per cent.

Consolidated Coal Co. of Maryland has declared an annual dividend of \$2 per share.

The Merchants and Farmers' Bank, Hogansville, Ga., has paid a dividend of 8 per cent.

The Fire & Marine Insurance Co., of Wheeling, W. Va., has declared a dividend of 3 per cent.

The Tacoma Building Society of Baltimore has declared a semi-annual dividend of 3 per cent.

A semi-annual dividend of 4 per cent. has been declared by the Davis & Wiley Bank, of Salisbury, N. C.

The Southland Colony of Fruit Growers, Tallapoosa, Ga., has declared its sixth monthly dividend of 5 per cent.

The First National Bank of Rockwood, Tenn., has paid an annual dividend of 7 per cent. and added \$10,000 to its surplus.

A semi-annual interest-dividend of 4 per cent. has been declared by the Southern Insurance Co., of New Orleans, La. The New Orleans Insurance Co. declared an interest-dividend of 3 per cent., and the Crescent Insurance Co. a dividend of \$4 per share.

Financial Notes.

THE First National Bank of Birmingham, Ala., will shortly add \$75,000 of new capital to its business.

It is stated that Phillip J. Green, of Denver, Col., will establish a private bank at New Orleans, La., with a capital stock of \$500,000.

THE Union Loan & Trust Co., of Atlanta, Ga., F. H. Cathcart, general manager, has announced its intention of operating in South Carolina.

THE Aurora (Mo.) State Bank has decreased its capital stock from \$25,000 to \$15,000. The Bank of Perryville, Mo., has increased its capital stock from \$10,000 to \$25,000.

MR. WM. C. CORNWELL, president of the New York State Bankers' Association, has written an article for the February Forum entitled "Should the Government Retire from Banking?" in which he declares that the currency troubles in the United States are due to the government's assumption of the prerogative, rightly belonging to banks, of issuing notes for circulation; and he explains why this function should naturally be left to the banks. In the same number of the Forum, Mr. Alfred S. Heidelbach explains "Why Gold is Exported." The principal reasons he gives for the constant drain of gold from this country are: Disgust of foreign investors because of recent developments in our railroad management; dismay at the condition of the treasury and our currency, and the fear that if they invest money here, they may not be able to get back as good money as they gave. He says that no change in this state of affairs may be expected until the government goes out of the banking business and we have a more elastic currency.

A DEPARTURE from its usual form characterizes the January number of *Electric Power*. The change is an excellent one, and the publication promises to become an important magazine in the electrical railroad. A pleasing feature is the supplying of reading matter of not too technical a nature, and as a result the articles are both interesting and instructive to the lay reader who likes to follow the important events in electricity. The range of articles in the January number are of a practical character, and the contributors include men of prominence in the electrical industries. The magazine is published at 36 Cortlandt street, New York city.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 405.]

Better Railroad Rates Needed.

SOUTHERN OFFICE,
WEBSTER, N. C., January 5

Editor Manufacturers' Record:

We find a serious drawback to our business in the freight rates from our section of Western North Carolina to Philadelphia and other Eastern points. More favored points have the advantage over us. If our section could be favored with lower rates it would not only place us in a better position to compete with others, but would be an incentive to capitalists in developing our section. This would insure to the railroad an increased business and have a tendency to invite a class of investors who are at present deterred on account of freight rates. The MANUFACTURERS' RECORD champions the cause of Southern development and business prosperity, and we kindly ask you to present our grievance through the columns of your valuable journal.

WEBSTER MINING & IMPROVEMENT CO.,

ROMULUS J. HOFFMAN, President.

[NOTE—The country surrounding Webster is one of the richest mineral districts of that wonderfully rich mountain region of Western North Carolina. It ought to receive every possible help from the Southern Railway Co., for it contains possibilities of freight traffic that can only be appreciated by a personal examination of its mineral and timber resources.—ED. MANUFACTURERS' RECORD.]

Baseless Attack on Southern Roads.

An English newspaper, the Financial Times, of London, seems to be attracting considerable notoriety by its attacks on the standing of American railways, especially Southern lines. So much animus and bitterness have been displayed that the reader infers some unseen influence is directing these attacks for special purposes. Prior to the annual meeting of the Louisville & Nashville Company it was severely criticised by this publication, which intimated that the annual report would be an unpleasant surprise to the stockholders, and that it would be anything but satisfactory. On the contrary, it was so complete in all its details that the market was very favorably affected and the stock rose several points.

The Illinois Central is another road which has been singled out for several articles, all apparently written to depreciate its value with English security-holders. The company is blamed for securing a seaboard terminus by buying the Chicago, St. Louis & New Orleans line; in fact, all the roads it has acquired south of the Ohio river are denounced as profitless investments and termed "nigger roads." To American investors such articles amount to little, as the status of the Illinois Central is too well known in financial circles, and the ability and conservatism of President Stuyvesant Fish and his assistants are beyond question. The policy of the present company has been to develop the system from a combination of lines in Illinois which had no terminal except at Chicago into a system which reaches from Chicago to New Orleans, touching all the important points on the Mississippi river, and entering the great grain fields of the Northwest. At Chicago it has the most valuable water frontage of any line entering that city, while its suburban traffic is simply enormous. Through the plans of the present company the Central secured a practical monopoly of the World's Fair passenger business into the exposition grounds, compelling other companies to pay for running their trains over its route. Its New Orleans business has grown to such proportions that it has had

to enlarge its yards by adding several miles of sidings, and is now preparing to build several large warehouses and new wharves. In addition to the cities named, the Central reaches St. Louis, Mo., and the principal cities of Iowa, Indianapolis, Ind., most of the larger towns in Illinois, and by acquiring the Chesapeake, Ohio & Southwestern it connects Louisville, Ky., and Cincinnati, Ohio, two of the largest cities in the country, with Memphis, Tenn., on its main line, which traverses the Mississippi valley, one of the most fertile and productive agricultural sections in the world. It is practically the only great trunk line from the lakes to the Gulf of Mexico, and a large portion of its revenue is derived from the "nigger roads" which give it its Southern connection.

The MANUFACTURERS' RECORD does not intend to publish any defense of the Illinois Central or any other road which has been criticised by the London paper. The way in which the Central's policy is upheld by its stockholders and its position as a traffic earner form ample defense in themselves. But to English investors who are unfamiliar with the true condition of affairs the MANUFACTURERS' RECORD desires to give a brief explanation in order to guard them from such baseless attacks as that made by the Times.

An English View of It.

An English capitalist who has come to this country within a few months, and who is extensively interested in American railway securities, is Mr. B. Newgass, of London. Mr. Newgass represents the English bondholders of the Atlantic & Danville Railroad, who bought the road at foreclosure sale last year and reorganized the company with Mr. Newgass as president. In a letter to the MANUFACTURERS' RECORD concerning the attitude of foreign investors towards American investments, he writes as follows:

"I think I express not only public opinion in this country, but especially the views of foreign investors, in saying that it will be many years before people will commit again the same mistakes which they have during the past five, ten or twenty years, in indiscriminately contributing money to the building of railroads and taking ordinary mortgages, or even in taking guaranteed bonds (unless they are guaranteed by corporations which are entirely and unquestionably responsible), and unless it can be shown beyond a doubt that the investments will prove profitable, as the public has, during the period mentioned, made very costly experiments.

"A great injustice is done to existing new lines, which do not even make both ends meet, by unmerciful taxation, both State and municipal. This is a hardship which should be entirely removed, and unless it is done it will seriously interfere with the building of roads which would otherwise be undertaken. Nearly all the railroads have contributed vast benefits to the country they traverse, in making the lands more valuable and productive, and correspondingly larger tax contributors. It is the land, therefore, which ought to be taxed, and the railroads should only be taxed according to their net incomes over and above their current expenses. This is a matter which should receive serious attention and consideration, especially by those who desire to have railroads introduced into their neighborhoods."

Coming as this does from a noted financier, it is worthy of careful consideration.

B. & O. to Pay a Large Loan.

In connection with the recent criticisms of the Baltimore & Ohio annual report and statements relative to its financial condition, it is interesting to note that a loan of \$3,872,000 is due, in equal payments, on March 1 and September 1 of this year.

The MANUFACTURERS' RECORD has authority to state that this amount will be paid in full on the first date, and the annual interest charges of the company reduced \$232,320 thereby. The company has a sinking fund in bonds ready to meet this obligation, which now amounts to \$3,799,412, or \$17,000 more than the loan. Nearly \$1,000,000 of indebtedness was also due January 1. The MANUFACTURERS' RECORD has made inquiries in Baltimore, and, as far as can be learned, all holders of this were paid promptly, as President Mayer was quoted as saying they would in December last.

A Mississippi Harbor.

The Gulf & Ship Island project, which is familiar to readers of the MANUFACTURERS' RECORD, has received encouragement by a court decision which grants the company 76,800 acres of pine lands. W. L. Nugent, of Jackson, Miss., attorney for the railroad company, in a letter to the MANUFACTURERS' RECORD, states that this land is offered at \$5.00 per acre. The sum to be realized with a \$400,000 bond issue will complete the line to Hattiesburg, which would make its entire length seventy-two miles to Gulfport, Miss., the seaboard terminus. Mr. Nugent writes that the company will be ready to solicit bids for construction, etc., as soon as the land is sold. About twenty miles of road are now completed. It is proposed to build four piers, each 2000 feet long, at Gulfport, on Mississippi sound, where, it is claimed, by a proper jetty system, a minimum depth of twenty feet can be permanently secured. The piers would accommodate four ocean steamships. The Gulf & Ship Island is surveyed through 145 miles of timber country, but its proposed northern terminus is Jackson, where it would connect with the Illinois Central and Cincinnati & New Orleans.

Coal Shipping at Wilmington.

A dispatch from Wilmington, N. C., states that the Cape Fear & Yadkin Valley Railroad will erect coal chutes at its terminus with the view of shipping coal from the Pocahontas district, also from the Egypt (N. C.) mines, by water. It is calculated to haul about 150 carloads per week, to be increased according to the demand.

Railroad Notes.

JOHN F. FLOURNOY has been appointed permanent receiver of the Georgia Midland & Gulf Railway.

G. B. MCCORMICK, of Birmingham, Ala., has been appointed manager for the entire property of the Tennessee Coal, Iron & Railway Co. Mr. McCormick was formerly assistant manager.

ADRIAN VANDEVERE has been appointed receiver of the Roaring Creek & Charleston road, a line partially built in West Virginia. It is projected between the points named, a distance of 100 miles.

THE Southern Pacific Railroad Co. will add six new locomotives, weighing with tenders nearly 100 tons each, to its passenger equipment. They are to be built by the Schenectady Locomotive Works.

It is announced that operation of the Lawrenceville branch line, extending from Lawrenceville to Suwannee, Ga., ten miles, is to be resumed. The road has been abandoned for some time. T. M. Peebles, at Lawrenceville, is president.

A TRAIN on the Georgia Railroad recently made the run from Augusta to Atlanta, 171 miles, in 180 minutes, or nearly a mile a minute. This indicates the excellent quality of Southern locomotives and how well Southern railroads are kept in proper condition.

CONTRACT for building the new steel draw and approach for the bridge over the St. John's river at Palatka, Fla., for the Jacksonville, St. Augustine & Indian River

Railroad Co. has been awarded. The work will be done by the Pittsburg Bridge Co., the contract being closed through William T. Cotter, of Jacksonville, Fla., State agent of that concern.

It is generally understood that the Atlantic Coast Line will purchase the Charleston, Sumter & Northern when the latter road is offered for sale on February 15. It extends from Prehnalls, S. C., to Gibson, N. C., 133 miles, with branches aggregating sixteen miles more. Charles E. Kimball, of New York, is its president. The road is a feeder to the Wilmington, Columbia & Augusta branch of the Coast Line.

NORTHERN MONEY IN MARYLAND.

Sugar-Trust People Endeavoring to Purchase a Seaside Resort.

The MANUFACTURERS' RECORD learns on good authority that a Northern syndicate is endeavoring to purchase the property of the Sinepuxent Beach Co. at Ocean City, Md., and that several of the syndicate are interested in the Baltimore, Chesapeake & Atlantic Transportation Co. It is well known that several shareholders of the American Sugar Refining Co., or "Sugar Trust," are directors in the transportation company which owns the Baltimore & Eastern Shore Railroad and the steamer lines from Baltimore which connect with Ocean City. John E. Searles, of Jersey City, is one of the sugar company directors and president of the Baltimore, Chesapeake & Atlantic Company. He is one of the principals in the negotiations, and it is understood that if purchased Mr. Searles and his associates will develop the resort by building a much larger hotel than the one now owned by the company, on the plan of the hotels at Manhattan Beach, and, in short, make Ocean City the Atlantic City of Maryland. The property is extensive enough for a city site. It has a frontage on the sea beach of eight miles, and a width of 1200 feet. The beach is one of the best on the Atlantic coast.

The plan of the would-be purchasers is to establish a steamer service across Chesapeake bay from Baltimore to Claiborne, Md., thence by rail to Ocean City, the distance to be covered in less than five hours.

The only indebtedness on the property consists of a \$50,000 bond issue and a small mortgage on the present hotel, and it is understood that the present owners will part with it at a comparatively reasonable figure.

In their purchase of the railroad and vessel lines mentioned the Searles syndicate made an investment of over \$2,000,000. From this it can be judged that the plan to develop Ocean City in connection with their transportation lines will be on an extensive basis.

Spruce Wood Wanted.

Messrs. Otey, Walker & Bowyer, Lynchburg, Va., want to correspond with people who can furnish spruce wood for a pulp mill. They want full information and lowest cash price.

Wants to Move.

Messrs. Earle & Prouty, of Des Moines, Iowa, are reported as seeking to secure a new location for a large lumbering plant to be devoted entirely, it is said, to walnut. It is stated that wherever they locate they will employ from fifty to seventy-five men. They have been in correspondence with the Commercial Club of Kansas City with a view to removing to that point.

THE business men of Rome and Floyd county, Ga., have formed an association to increase and foster the interests of that section. The officers are: President, W. M. Towers; secretary and treasurer, W. W. Vandiver; executive committee, R. D. Van Dyke, D. W. Curry, Thompson Hiles, R. G. Clark, John D. Moore, G. H. Miller, J. J. Seay.

MECHANICAL.**Foos Gasoline Engine.**

The advantages and utility of gas and gasoline engines have been fully estab-

lished, and this class of engines finds general employment where but limited power is required. Their efficiency for operating small factories, printing presses, pumps, elevators, small electric-light plants, cotton gins, threshing machines, etc., has led to wide application. With these engines there is no dirt, coal or ashes to be removed, and no fires to make nor waiting to get up steam. An engineer is unnecessary, and there is an absence of danger of explosion. The floor space required is comparatively small, and when the engine stops furnishing power expense of operation ceases. We illustrate the Foos gasoline engine. The cut shows the engine with water tank, electric battery for igniting the charge and the gasoline tank. These engines are so arranged that they can be changed to either gas or gasoline.

The Foos Gas Engine Co., of Springfield, Ohio, manufacturer of these engines, be-

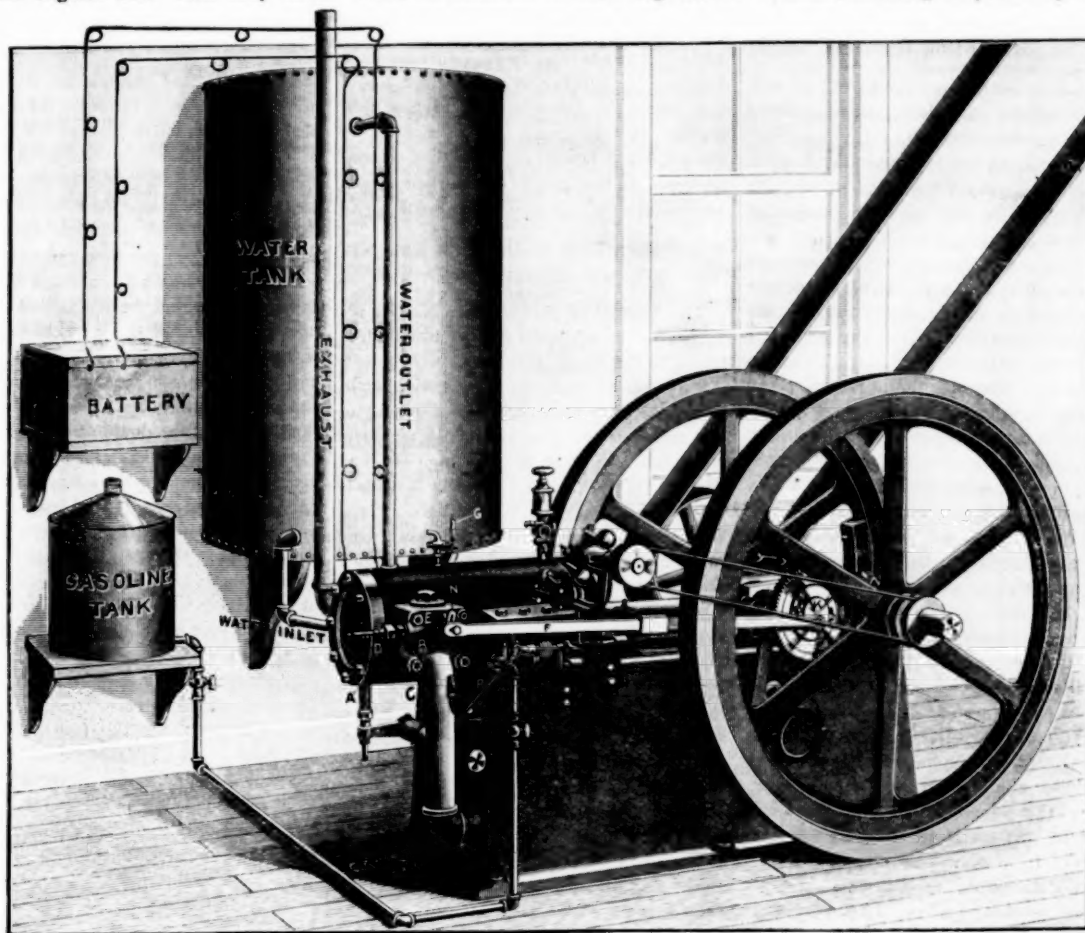
lieves it to be to the interest of all users of limited power to examine the claims made for this engine, which embrace economy, safety, freedom from smoke, heat, dirt, explosions and many other annoyances. The engines are well constructed, and before sent out each one is thoroughly tested.

all gum woods this machine is said to be of especial value, as the gum has no effect on the working of the tool, and perfect mortises can be made in the "fattest" yellow pine, leaving no core to drive, and thus, it is stated, removing all possibility of splitting stock. In this alone there is claimed to be a saving of from 10 to 25 per cent. In stock work, where a single size of mortise predominates, the machine can be so arranged that no laying out of work is necessary, and stiles cut to length and dressed can at once be put to the machine. As it runs smoothly, it requires no extra bracing of floors, and there is an absence of jar and noise. In range the machine is adapted to all sizes of tools from one-quarter-inch to one-inch, making all lengths of mortise from one and a-half inches upwards, and all depths up to six and a-half inches with one cut.

To Raise Broom-Corn.

The Farmers' Alliance of Lampasas county, Texas, has agreed to plant a large acreage in broom-corn this year and to organize a company to manufacture it. The plan suggested by Mr. A. F. Baker, of Lampasas, secretary, is for each member to plant a portion of his farm in broom-corn, and to sell the product to the factory and take pay in stock for the entire product. Five hundred farmers, Mr. Baker says, will be interested in the project, and each will contribute a small sum in cash to purchase machinery. Manufacturers of machinery for such a plant are invited to correspond with A. F. Baker, Lampasas, Texas.

THE Napoleon article in McClure's Magazine for January will be an account of his swift and skillful redemption of France from bankruptcy; his reduction of a vast confusion of laws to a compact and easily-understood code; his revival and expansion of the domestic industries, and his equipment of the country with roads, schools, markets and beautiful public buildings—a series of labors that give a more splendid exhibition of his genius than do even his wars. Many of the problems he solved for France are now occupying the attention of the American people. The marvellous wealth of Mr. Hubbard's Napoleonic col-



THE FOOS GASOLINE ENGINE.

The amount of gas or gasoline used is always in proportion to the power required. If the engine is required to give only half its power, then the amount of gasoline used will be reduced one-half. They do not require any water except the small amount used for the water jacket around the cylinder, which can be used over continuously, the only loss being from evaporation, which in a medium-sized engine would be but a few gallons per day. The gasoline tank can be placed outside the building and connected with the engine by a one-quarter-inch iron pipe, making the building secure from fire. Many are, however, placed in the same room with engine.

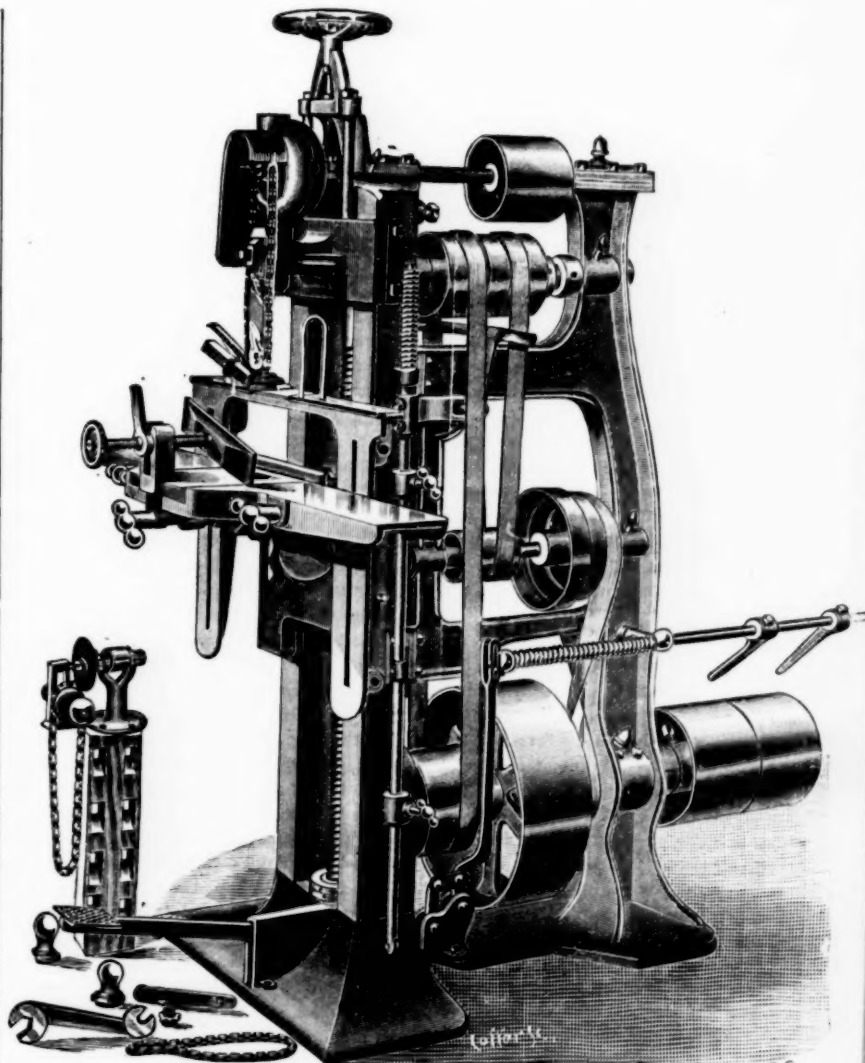
The cost of operating an engine with 74° gasoline, it is stated, will not exceed three-quarters to one pint per hour per horsepower, making the cost of operating remarkably low.

It is not required in these engines to clean the cylinders and valves every few days. They can, it is said, be run for months without any cleaning or other care than seeing that the bearings are oiled and the oil cups kept filled and the electric battery kept in good condition. These en-

gines can be readily taken apart, enabling them to be taken up the mountains by team or pack animals for use in mines and other purposes.

Chain-Saw Mortising Machine.

A machine that is considered to be a decided advancement in its special class is the chain-saw mortising machine which is illustrated on this page. It is just being introduced in Eastern factories by Force & Briggs, of 508 Liberty avenue, Pittsburg, Pa., who have the exclusive agency for the Eastern States. It is manufactured by the Dubuque Specialty Co., and is well known in the West. The mechanical details of this machine have been carefully wrought out, and the simplicity of its construction makes it readily understood and appreciated by practical men. The parts are strongly built, giving durability, and the design and finish of the machine is handsome in appearance. Being reliable in its operations, it is said to never lag or cause other machines to be idle waiting for its work, because it is fed to the chain automatically, and so leaves little chance for the workman to lag were he so disposed. It is claimed that with ordinary effort from 300 to 500 four-panel doors should be mortised in ten hours, and other work in proportion. With this machine no boring is necessary to start the work, saving one operation, as the chain does its own boring as it works. Another operation is saved by the chain cleaning out the mortise. It is claimed that in hard wood this machine will mortise from four to six times faster than any other. No chips or shavings are left in the mortise to be removed, as the chain brings out every particle of core with it. No reversing of stock is necessary to make any mortise up to six and a-half inches in depth, but a mortise can be put through thirteen inches by reversing. In yellow pine and



CHAIN-SAW MORTISING MACHINE.

ting stock. In this alone there is claimed to be a saving of from 10 to 25 per cent. In stock work, where a single size of mor-

tion is revealed in this issue, no less than twenty-three portraits, mostly full-page, appearing.

SOUTHERN TEXTILE INTERESTS.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 401 and 403.]

Looking for Location for a Bleachery.

[Special Corres. MANUFACTURERS' RECORD.]

LOWELL, MASS., January 21.

Millmen in this section are of the opinion that there is a great field for a bleachery for cotton goods in the South. At present most of the cotton cloth made in the South is shipped North for bleaching.

Some months ago a party from Lowell and Boston, practical millmen and men with money, went to Georgia and looked up a site. One of these gentlemen said to the writer a few days ago that they had difficulty in finding the proper quality of water; that there was so much suspended silt in the rivers from surface drainage that they came back rather discouraged, although not entirely disheartened.

Another gentleman, a mill agent, who was South within a month, says he knows of a spot where, within five miles of a city, there are natural wells affording all the clear water necessary to run a large bleachery—one large enough to catch most of the Southern mills' product and save the long journey North.

When the proper place is found the capital for a bleachery will be ready. There are now no bleacheries further south than Pennsylvania, and the field for that industry in the South is a fine one beyond doubt.

MARTIN.

The Dwight Mill at Gadsden, Ala.

The contract for erecting the main building of the Dwight Manufacturing Co.'s proposed mill at Alabama City, Ala., near Gadsden, was let January 16 to James Stewart & Co., of St. Louis. The building must be finished by June 1 and work begun February 1. The bid was \$100,000. Contracts for the other buildings, sewers, reservoirs, etc., are to be let later. J. Howard Nichols, treasurer for the Dwight Company (office, Lowell, Mass.), is now in Gadsden looking after the contracts. The plant will include main building 130x500 feet, three stories high; cotton warehouse 400x200 feet, cloth warehouse 150x200 feet, 150 five-room tenement-houses, 5,000,000-gallon reservoir, boiler and engine-rooms 100x200 feet, and smokestack twenty-five feet square at base and 250 feet high. All the contracts are expected to be awarded in sufficient time to allow the completion of the buildings by July, and before the year ends the machinery is to be in operation. Plans are drawn for an equipment of 50,000 spindles, half of which will be put in at first. From 8000 to 10,000 bales of cotton will be used yearly, manufactured into three-yards-to-the-pound sheeting for export to Turkey, China and Africa. Mr. Thomas Jefferson Coledge, of Boston, Mass., is president of the Dwight Company.

"Survival of the Fittest."

A dispatch from Manchester, N. H., says: "Wages in cotton mills may undergo readjustment, if the necessity should arise, but the wheels will keep turning as long as possible. Said Agent Knight, of the Amory: 'It is simply a question of the survival of the fittest. The employees of these Southern mills work twelve, fourteen and all kinds of hours a day for any kind of wages.' The railroads of the South discriminate in favor of the mills in that section. On the same class of goods we simply can't compete with them. We must bring them up to us, or we must go down to their level. It does not affect us so much, as our goods are of finer quality.'"

Southern mill hands are not in the condition that Mr. Knight would have the public believe. They are earning in proportion to cost of living just as good wages as those in New England. They are contented. It may be "a survival of the

fittest," but the "fittest" will be in the South.

Will English Cotton Mills Go South?

Will English textile companies join with New England manufacturers in seeking mill sites in the South?

Judging from the reports in the English press, it will only be a question of time before many of the spinning companies will be obliged to go where they can produce goods at a lower cost even than at present. One of the principal journals in the Lancashire district, the *Oldham Standard*, recently contained a very elaborate and painstaking review of the year's operations in that district. Figures were given showing the operations of ninety-four companies having a combined share capital of £3,823,000 and employing over 7,000,000 spindles. These companies have besides a loan and debenture capital of £3,276,000, or a total loan and share capital exceeding £7,000,000 sterling. Out of these ninety-four companies, fifty succeeded in earning a profit between them after paying a mortgage and debenture interest of £77,600. On the other hand, forty-four piled up a combined loss of £73,100, so that the net balance of profit made by the whole of the ninety-four companies amounted to no more than £4500, or just about enough to distribute a dividend of $\frac{1}{4}$ per cent. among the shareholders. There is not much in this result to encourage the infusion of fresh capital into the industry.

Indifferent as this record seems, it is yet superior to that of 1893. Last year fifty-seven of these ninety-four Oldham companies paid no dividend at all, but in the previous twelve months seventy-one out of ninety-seven were non-dividend payers. It will be noticed that the number of companies operating was less than in 1893, and this is accounted for by the fact that two or three "went under" last year.

Commenting on this report, another English journal says:

"Whatever may be the course of events in the immediate future, we cannot, however, regard the more distant outlook for the English cotton spinning industry without some apprehension. Continental and American competition increases year by year, and more threatening still is the development of cotton-cloth manufacturers in India and the far East. The export of textile machinery increases, and although our manufacturers cannot be expected to refuse to execute such orders on national grounds, they are undoubtedly placing in the hands of other countries the most modern weapons of competition. A good deal of the machinery employed in the Lancashire mills is old and out of date, and in spite of the advantages which, as we have seen, the newly-equipped factories enjoy over their rivals, yet there is at present but small temptation to embark large amounts of fresh capital in the industry. Whatever happens on the Continent, we may fairly expect that the manufacture of cotton cloth will extend in India, China and Japan, and even in the United States. Only by dint of the most strenuous efforts and the utmost diligence in promoting technical education can we hope to hold our own in the world's markets—more, it would be too sanguine to expect. It is true that other markets, especially in Africa and the East, will in time be opened up, and the expansion of the South American republics is as yet very far indeed from having reached its limit. But the growth of production will at least equal the widening of the area of consumption, and may very easily exceed it.

"A more immediate cause of anxiety is the effect of the new duties imposed in

India. It was the excellent demand from India which enabled a large number of the English companies to do as well as they did last year, and a measure calculated to contract the imports of cotton cloth into that country would inflict a serious blow on the industry."

As yet the success of Southern cotton mills has made but little impression in England, and there is ground for belief that when the great success of Southern textile interests are fully understood abroad, not a few of these English companies may be induced to invest their means and employ their ability in the South.

A Mistaken View of Our New England Friends.

The *Mirror*, of Manchester, N. H., referring to the tendency of cotton-manufacturing to the South, says:

"We reprint from the *New York Herald* an article in regard to the development of the cotton industry in the South which is more interesting than pleasing. It was written in Baltimore, and it is doubtless tinged by the wishes of its Southern author, but the statistical facts are, we think, correctly stated, and most of the conclusions are logical. There are substantial reasons why all the finer grades of cotton will be manufactured in New England in the future, as they have been in the past. The factories are here, and they cannot be moved. The skilled labor, without which such goods cannot be produced, is here, and it cannot be had in the South for a long time to come, if ever. The Northern climate is peculiarly adapted to the business, while that of the South is not. But it is folly to shut our eyes to the fact that in the manufacture of coarse goods, which do not require the greatest skill, and in the cost of which the raw materials are the largest items, the South has advantages which are likely to draw to that section the new mills designed for that class of goods. With a factory in the midst of a cotton country, and located, perhaps, upon an inexhaustible bed of coal, with wages very much less than they are here and the working days very much longer, they can make heavy cottons for enough less than the cost to our mill-owners to give them control of the market."

It is somewhat astonishing to see the persistency with which the New England papers take the ground that the South cannot produce fine goods. A few years ago they just as vigorously denied the ability of the South to compete with New England in any line of textile-manufacturing. The South today is far better equipped for the production of fine goods than it was a few years ago for making the coarsest grade of goods. Our New England friends need not delude themselves with the idea that the South is not going to be a competitor in the highest grades of goods. That position might as well be abandoned at once. If they are going to meet Southern competition, they will have to meet it in fine goods as well as in coarse goods.

The New "Cooper" Gin.

Attention has been attracted to a cotton gin invented by J. W. Cooper, of Mayesville, S. C., for which some remarkable claims are made. G. W. McBride, of that place, sends us the following description of the new device:

"It has two sets of interlapping saws in one feed-box. Examinations and trials with a working model show that it will do nearly or quite double the work of the gins now in use at an expenditure in the first cost of gin and in power to operate of less than at present. Take an ordinary gin, say sixty saws; remove the entire breast; make the proper modification of the gin frame, and attach a second set of saws (with shaft and pulley for driving) parallel to the set now in the gin, and below them, but near enough to allow the saws on the

two shafts to interlap about one-quarter of their diameter; place the lower shaft to the right or left a little, so that each of its saws may register one-quarter of an inch right or left from the upper saws; construct a new breast with a throat of same size as the old one, but with ribs sufficiently long to include both sets of saws; the ribs, of course, have just below the upper set of saws an offset of one-quarter inch to permit the lower set to register; the ribs have also the proper curve, so that the lower set of saws will have about one-half inch of clear ribs above them before the upper set comes through them; now lower and advance the brush so that it will clean both sets of saws, and you have the new gin.

"There are now 120 saws at work on the same roll that has been handled by sixty. The result is that the speed of the feeder will have to be double what it was, and the cotton kept from in front of the condenser, so that it will not choke. It might appear that it would take double the power to pull the 120-saw gin, but as the 120 saws are cleaned by one brush, fed by one feeder, and the output handled by one condenser, and all of these of the size now used for 60-saw gins, but little increase of the speed of the brush is required. It is the opinion of mechanics who have examined the gin that one-third more power will be required to operate it than the gins now in general use. The space between the condenser drums may have to be reduced a little. As to the feeders, they all now pick up and elevate a great deal more cotton than the gin can use, and it has to be beaten back by a winged roller or similar contrivance, so that the only increase in power required is what is needed to pull the additional sixty saws.

"The following claims are made: 1. Double the amount of work for the same size gin frame, but containing double the number of saws; this point saves one brush, one feeder, one condenser, one entire gin frame, one-half floor-space and the labor of attending to one gin with its attachments. 2. The length of saw-shafts is reduced one-half, thus guarding against that objectionable wobble which appears in the best constructed gin after it passes sixty saws. 3. Better lint. That the lint is better the work of the model shows. As to the cause, there are a variety of opinions. It is likely that a good deal of the lint is pulled from the seed by the two sets of saws catching a lock at the same time, thus removing the fibre from the seed without jamming it against the ribs, which would leave the staple entire. There are three practicable ways by which the two sets of saws can be driven. Probably the best is the plan adopted by the inventor in his model—a pulley at opposite ends of the two mandrels and two belts from the line shaft."

Textile Notes.

IT is stated that Jno. R. White, of Athens, Ga., contemplates building another mill.

COL. D. K. NORRIS continues to canvass for subscriptions to the proposed new mill for Central, S. C.

THE Camden (S. C.) Cotton Mills is considering an issuance of \$100,000 in stock for new machinery.

THE Chamber of Commerce of Knoxville, Tenn., is making efforts to secure the erection of cotton mills.

THE directors of the Caraleigh Cotton Mills, of Raleigh, N. C., have decided to put in more spindles and looms.

THE Congaree Manufacturing Co., of Columbia, S. C., will start its plant as soon as same can be put in order.

THERE is talk of two cotton mills being built in Fayetteville, N. C. Northern capitalists contemplate one of them.

THE recent strike of the weavers at the Hagerstown (Md.) Silk Mills has ended, and the employees have resumed work on

the old terms. Numerous improvements were made during the strike.

THE city council of Athens, Ga., is endeavoring to secure the location of a cotton mill, and is offering a site and free taxes.

THE Salem (W. Va.) Manufacturing Co., manufacturer of woollens, has resumed operations after a shutdown of several months.

THE installation of the new engines in the Newberry (S. C.) Cotton Mill is being pushed, and operations will be fully resumed in a month.

THE stockholders of the Barnesville Manufacturing Co., of Barnesville, Ga., held their sixth annual meeting last week, and found their business in good condition.

THE Yaddin Falls (N. C.) Manufacturing Co. has put in a warper and is operating at night; now have one order for yarns which will take two months to fill. David B. Rodman is superintendent.

ACCORDING to report, some practical cotton manufacturers of Massachusetts and Philadelphia are endeavoring to arrange for the erection of a mill in the South for making gingham of a fine grade.

THE Tennessee Manufacturing Co., Nashville, Tenn., is starting its No. 1 mill, which is equipped with 15,000 frame and mule spindles and 400 plain looms operated on sheetings, shirtings and drillings.

A REPORT from Rome, Ga., states that a Northern company will erect a \$600,000 cotton mill at that place. An agent of the company is said to have secured options on a site, and returned North to make his report on the project.

AN enthusiastic meeting of the business men of Athens, Ga., was held on January 21, and it was determined to send a committee to Massachusetts to confer with the New England companies that intend establishing Southern mills.

THE citizens of Acworth, Ga., are moving in the matter of a cotton mill and will offer special inducements for the location of such a plant. Messrs. J. L. Lemon, John Awtry, W. K. Holmes and Penn Mitchell are on a committee in regard to the matter.

THE Ozark Cotton Mills Co. has been formed at Ozark, Ala., and will erect a cotton mill as soon as arrangements can be completed. The capital stock is placed at \$50,000, and will be paid for on the instalment plan. No machinery has been bought yet.

A MOVEMENT has been started at Shelby, N. C., to ensure the erection of a \$200,000 cotton mill on the instalment plan. A committee has been appointed to secure plans, equipment and general information. Messrs. T. D. Lattimore, E. Y. Webb and others are interested.

THE Erwin Cotton Mills, of Durham, N. C., has recently erected three large compartments to the cotton-house for the storage of cotton. The company is now building an extension to the dyehouse 100 feet long and two stories high, in order to better enable them to supply the demand for goods.

THE Aiken Manufacturing Co., which is to establish a cotton mill near Bath, S. C., will not use the old paper-mill building, as was at first intended. An entire new structure will be erected, and Mr. C. R. Makepeace, of Providence, R. I., is to prepare the plans. The output is to be a fine grade of brown goods. Messrs. Chas. Estes and Thos. Barrett, of Augusta, Ga., are interested.

A PLAN is afoot at Columbia, S. C., for a new cotton mill, and charter has been applied for. It is proposed to be equipped with 7000 spindles, to have a capital stock of \$150,000, and be known as the Richlands Mills Co. Mr. W. B. Smith Whaley, the well-known mill engineer, of Columbia, is promoting the new enterprise. The in-

corporators are Mr. Whaley, W. A. Clark, Robt. W. Shand and others.

AT a meeting of the stockholders of the Batesburg (S. C.) Cotton Mills, held on the 16th inst., it was decided to increase the capital stock from \$50,000 to \$100,000, and to start the mill at once, purchasing one-third of the machinery (about \$30,000 worth) now, and the balance later on or as soon as practicable. Negotiations have already begun for the purchase of the first instalment of the machinery.

THE stockholders of the Monroe Cotton Mills held a meeting last week and the following board of directors was elected: F. H. Wolfe, J. R. English, H. M. Houston, W. H. Fitzgerald, A. F. Stevens, A. M. Crowell, W. C. Heath, H. A. Shute and J. M. Belk. The directors elected Mr. J. R. English president of the board; Mr. W. W. Owen was re-elected superintendent of the mills, and Mr. Garrison Medlin, secretary and treasurer. The mill is in good condition.

THE Hermitage Cotton Mills, of Reidsville, N. C., were sold at public outcry on the 16th inst., under an order of the court, by F. H. Fries, receiver. The sale attracted considerable interest, and the property was bought in at \$24,200 by Messrs. Howell, Orr & Co., of Charlotte; Heath, Springs & Co., Lancaster, S. C., and the Bank of Reidsville, representing a syndicate of creditors. The plant is very valuable, in excellent shape, and is said to have cost over \$100,000.

ABOUT \$135,000 has now been subscribed to the new cotton-mill company at Greenville, S. C., in which Mr. F. W. Poe is the prime mover. Application for a charter has been made under the name of the F. W. Poe Manufacturing Co. with an authorized capital stock of \$250,000, and as soon as \$175,000 is secured organization will be effected. The incorporators named are Messrs. F. W. and N. C. Poe, Frank Hammond, William Wilkins, W. E. Beattie, C. H. Schwing, W. C. Cleveland, H. C. Markley, T. Q. Donaldson and Lewis W. Parker.

THE annual meeting of the stockholders of the Tuscaloosa Cotton Mills, of Tuscaloosa, Ala., was held on January 16, and it was decided to put in at once fifty new looms, which will make a total of 350. The improvements will be made out of the net earnings of the past twelve months. The report of the president showed the mills to be in excellent condition, with orders ahead. The following board of directors was elected for the ensuing year: W. F. Fitts, Sr., Foster Fitts, C. N. Maxwell, Robert Wilson and E. N. C. Snow. The board then elected the following officers: F. Fitts, Sr., president; Foster Fitts, secretary and treasurer, and Robert Wilson, superintendent.

A LATE addition to the literature on the subject of heating by furnaces is the "Furnace Work Manual." This aims to present an exposition of furnace work in all its branches, and was compiled from the files of the American Artisan by Sidney P. Johnston. Its purpose is to be of value to all in any way interested in practical furnace work. Information necessary to the manufacture, location and proper putting up of different kinds of both cast iron and steel or wrought-plate furnaces is presented. All patterns required for this work are given, as well as complete and comprehensive data and tables as necessary for the proper and correct calculations which come up in actual work and practice. The calculations are in plain figures, so as to be readily understood by the most ordinary mind, and sketches and drawings are given whenever necessary to simplify the text. The book will be found handy for reference purposes, and a practical help in its special field. It is published by the American Artisan Press, 69 Dearborn street, Chicago, Ill.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

A New Move in Cotton Oil.

[Special Cor. MANUFACTURERS' RECORD.]

DALLAS, TEXAS, January 18.

Several small mills and a few of the large ones are already having their oil put up in one to five-gallon cans, and are realizing a handsome price for same. The Merchants & Planters' Oil Co., of Houston, has put in a large plant, consisting of a special refinery equipped with all the latest improvements, and a large canning factory with a capacity for from one to four carloads of canned oil per day, and is putting on the market its "Diamond Butter Oil" for cooking, which it is advertising extensively, and is pushing the sale of its brand of oil, having employed Mr. E. L. Young, formerly in the brokerage business at Dallas, to take charge of this branch of its business. It is expected it will prove a grand success, and there is no reason why other mills cannot follow its example; in fact, it seems that they will have to in self-defense.

The committee on the press-cloth factory will soon be able to make a favorable report to the mills. We note that Puech & Frerrett, of New Orleans, are also soliciting stock subscription for a similar institution; so we will likely have two press-cloth factories in Texas instead of one, which means more competition, and doubtless cheaper press-cloth.

The Market for Cottonseed Products.

NEW YORK, January 22.

Within the short space of a few hours the conditions which governed the cotton-oil market have been reversed. The previous week closed with a firm market and cheerful outlook comparatively, but the week under review witnessed a collapse in values paralleled but once previously. Exports are practically at a standstill, while the same condition, to a very material extent, may be said to characterize home consumption. The cause is directly traceable to the surprising slump in the market and the efforts made by holders to present a strong front to avert what appears to be the inevitable. Deliveries made during latter part of the week bear no important part on current dealings, being in the main integral parts of unfulfilled contracts. The sudden drop in price of compound lard has been the factor which primarily unsettled the market and brought about the present chaotic order of things. An uneasy feeling pervades oil circles with regard to the future, yet the outlook indicates that the volume of business, which must of necessity come in the near future, has been but temporarily delayed, awaiting a stronger market. Current quotations are merely nominal, and, although on a low basis to effect sales, a still further reduction must be conceded. Consignments of butter oil to Holland have been conspicuous by their absence, however. Aside from the question of values, the limited number of steamers sailing for that country recently reduced exports in the same ratio. Several lots of oil are held in store purely as an investment, and that the hoped for rebound in values will reimburse the speculators; nevertheless, wiseacres in the business evince a decided anxiety to release holdings at current quotations. The sale of 5000 gallons of prime summer yellow on a 26-cent basis, sellers' option, reached the climax in the surprises of the week. At this writing a slightly-improved feeling is apparent. Heavy oil stocks are being carried by Southern holders, with ample seed supplies yet in sight. Sales of Texas prime crude have been reported at 19 cents loose at the mills, while off crude,

of which there appears to be an unusually large proportion, is offered at 18 cents, with few purchasers. The reported sales are 43,250 gallons crude in barrels at prices ranging from 23½ to 24 cents, and eighteen tanks at 19 to 20 cents loose at mills; 163,750 gallons prime summer yellow at prices ranging from 26 to 29 cents; 10,000 gallons choice yellow at 30 cents, together with eighty barrels off quality at 27½ cents. Current quotations are as follows: Crude, prime, 23 to 24 cents; f. o. b. mills, 18 to 20 cents; crude, off, 22 to 23 cents; yellow summer, prime, 28 to 29 cents; yellow summer butter, 30 to 31 cents; yellow summer, off quality, 26½ to 27 cents; white summer, 30 to 32 cents; yellow winter, 36 to 38 cents; white winter, 37 to 39 cents; soap stock, 1 to 1½ cents per pound.

Cake and meal continue unsalable, and concessions to actual cost of manufacture are not sufficiently attractive to result in business to an appreciable extent. Export statistics record no shipments during the past week to European points from this port. About 2100 tons in the aggregate were consigned from New Orleans to German and Dutch ports, England, the erstwhile chief consumer of American stock-feeding products, being practically out of the market. It will be readily understood with what rapidity cake stock accumulates on mill premises when the foregoing figures, representing the exports, together with the meagre home consumption, compare with the mill capacity of the country for a similar period. With the mills running full time throughout the country 60,000 tons of cake per week would not be a disproportionate estimate. But under present conditions, although seed is obtainable at a fair valuation, with anything resembling even moderate movements of cake and oil, the mills cannot make full time, and therefore the raw material is dear at any price. It is a gratification to be assured of the fact that those who control the destinies of the business fully realize the gravity of the situation, and are making practical efforts to avert such contingencies on the lines previously shown in detail in the MANUFACTURERS' RECORD, having in view development of the business by means of cattle-raising on an extensive scale, the product used being in the main cotton meal. Spot meal, \$18 to \$19 per ton; New Orleans prices, \$16 to \$16.50 per ton.

Cottonseed-Oil Notes.

THE new railroad commission of South Carolina has issued a circular reducing the rate on cottonseed hulls in less than car-load lots. Cottonseed hulls are generally sold by cottonseed-oil mills for feed, and the reduction will benefit both millman and purchaser.

THE Memphis Car & Foundry Co., of Memphis, Tenn., has closed contracts with the Illinois Central, Louisville & Nashville, Tennessee Midland and Kansas City, Memphis & Birmingham Railroads for a portion of car-wheels and castings they will use during the ensuing year. This insures steady work for the foundry department of this company for this year. The company is also rebuilding a large number of freight cars for the Kansas City, Memphis & Birmingham and the Kansas City, Fort Scott & Memphis, the Citizens' Street Railway, and constructing a number of new cars for different tank-line companies.

MESSRS. P. H. & HENRY L. HARRALSON and James L. Tanner have formed a partnership under the firm name of Harralson & Tanner in Atlanta, Ga., for the purpose of handling a general real estate and promotion business. These gentlemen have had long experience in Southern industrial interests, and propose now to turn their attention to securing the location of manufacturing establishments and the investment of capital in the South.

PHOSPHATES.

Florida Phosphate Again.

ORLANDO, FLA., January 12.

Editor Manufacturers' Record:

In the MANUFACTURERS' RECORD of January 4 there is a reply to a recently-published letter of Mr. R. E. Rose, the whole tenor of which seems to be an effort to "bear" the phosphate industry of Florida, or else it emanates from some theorist who has helped to spend the money of innocent, guileless stockholders in carrying out some of the many pet theories of the many so-called mining engineers that come to this State "thick as autumn leaves in Valhalla" to show how "it should be done," and succeeded in showing how "not to do it." I have seen money wasted and thrown away by company after company, reaching up into the hundreds of thousands of dollars, and still their plants are failures; while, on the other hand, men who were practical, besides being willing to learn by the experience of others, and not so wedded to their opinions and theories as to be willing to believe all the world were idiots except themselves, have gone on quietly and made the grandest success. They brought into the business good practical business sense and business methods. They had no fancy superintendents at \$10,000 per annum, with attendant heavy traveling expenses, and many other overpaid employees.

Now, the object of this letter is not so much a defense of Mr. Rose's letter or a refutation of the reply thereto as to show the faith of myself and associates in the phosphate business by the following bona fide proposition, viz.: For the sum of \$25,000, deposited in some bank in this State, in escrow, and not to be paid over until the full completion of the contract, we will furnish all material, machinery, etc., and erect a plant with a capacity of not less than 20,000 tons per annum, with a dry-storage bin of 4000 tons capacity, and then contract to take charge of and run the same for five to ten years, keeping up all repairs and turning the plant back at expiration of contract in good order, and turning over to owners a minimum of 20,000 tons per annum at one-half the market price of the phosphate, whether it be \$2.00 per ton or \$5.00 per ton f. o. b. at the mines. The only condition we exact is that the land must be examined by ourselves in order to be satisfied it contains a sufficiency of material to justify a contract for a term of years. We have no land for sale and no interest in any of the many good tracts now on the market, and do not propose to even offer any suggestions in that direction, only reserving our privilege to make a full examination to ascertain the quantity of material accessible.

Now, take the quotations as given by the MANUFACTURERS' RECORD on January 4 of land rock at \$4.65 to \$4.75 f. o. b. Tampa, and you have \$3.25 to \$3.35 f. o. b. mines; then one-half would be, say, \$1.65 per ton paid us, leaving the same to the owners. Then, taking that as the average price throughout the year, and you have a net profit to owners of \$33,000 per annum for the 20,000 tons we contract to turn out. I say nothing about the cost of the land, further than I have every reason to believe that a conservative estimate would place the cost at \$15,000. Then \$25,000 for plant would make the entire cost \$40,000, on which owners would receive back annually \$33,000.

We mean exactly what is here stated, and are ready to bind ourselves to its consummation.

Every piece of machinery to be first-class of its kind, and a photograph of each to be attached to specifications. Within four months from signing of contract, the plant to be running. We have nothing to do with the marketing of the output, only turning over in the storage bin first-class, well-

cleaned dry material of the kind found in the land. "MINER."

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD, BALTIMORE, January 24.

The movement in phosphate rock is very light and the market quiet, with prices about steady. Owing to the unsettled state of the fertilizer market buyers are not prepared to purchase for future wants, and are only buying to satisfy immediate requirements. At points of production both in Florida and South Carolina the markets have been very quiet since the opening of the new year, and shipments have been light. Stocks in Europe are large enough for present wants, and there is very little going in that direction. The home demand is restricted by the uncertainty of agricultural conditions, and later on a better trade is expected. Mining operations are being carried on with as much vigor as usual, and the output will be of considerable volume in the next sixty days. The market at points of production is about steady at the following quotations: South Carolina crude, \$3.75 to \$4; hot-air-dried, \$4.25 to \$4.50, and ground rock, \$6.50, all f. o. b. Charleston. Florida rock is quoted \$3.25 to \$3.50 for river pebble, and \$4.65 to \$4.75 for land rock, all f. o. b. Punta Gorda or Tampa. The charters reported in the local market are the schooner Lida J. Lewis, rock, Charleston to Baltimore, and Blanche Hopkins, rock, Fernandina to Baltimore. In New York the freight market is quiet for charters, while rates still remain at a low basis in every direction. General cargo rates are unchanged. The phosphate charter market is a shade better, and the following business is reported during the past week: A bark, 560 tons, from Redonda Island to Cartaret, N. J., with phosphate rock, \$2; a steamer, 1173 tons, from Tampa to Harburg with phosphate, 17s. February; a foreign steamer from Charlotte Harbor to Riga with phosphate, 18s. 6d. February-March.

FERTILIZER INGREDIENTS.

A very quiet market has ruled during the past week, and the tone is generally weak for ammoniates. Stocks in sellers' hands are generally large, and buyers are disposed to hold off and are only purchasing to supply immediate wants. Dried blood and sulphate of ammonia are freely offered, and prices are generally in buyers' favor. Nitrate of soda is about steady at a slight decline under more liberal arrivals in New York.

The following table represents the prices current at this date:

Sulphate of ammonia, gas.....	3 15@ 3 20
Sulphate of ammonia, bone.....	3 15@ 3 20
Nitrate of soda.....	2 10@ 2 15
Hoof meal.....	1 90@ 1 95
Blood.....	2 00@ 2 05
Azotine (beef).....	2 10@ 2 15
Azotine (pork).....	2 10@ 2 15
Tankage (concentrated).....	1 75@ 1 80
Tankage (9 and 20).....	1 50 and 10
Tankage (7 and 30).....	17 00@ 18 00
Fish (dry).....	22 00@ 23 00
Fish (acid).....	15 00@ 15 50

CHARLESTON, S. C., January 21.

Trade in phosphate circles has developed nothing new or striking during the past week. "Signs of the times" do not show much encouragement to producers for the close future. The markets at points of consumption, save European, are dull, and report well stocked up for the season's run. Local factories are purchasing in small lots, and there is some movement of rock going on. With anything like a good shipping season among the manufacturers the stock of fertilizers, which has been curtailed over one-third from last year's production, will be pretty well worked off, and phosphate miners will be in a better position. Prices quoted are \$3.50 for crude, \$4 to \$4.25 for hot-air-dried and \$7 for ground rock, all f. o. b. Charleston. The water shipments for the week were the Elmiranda, 960 tons for Boothbay; T. W. Stone, 575 tons for Wilmington, N. C. The coastwise shipments since September

I were 32,209 tons crude and 715 tons ground rock, against 40,518 tons crude and 300 tons ground rock for same date last year. The phosphate commission has been on its annual tour of inspection, visiting during the first part of last week the land-mining companies along the Ashley river, and devoting the latter part to the Coosaw river companies.

FLORIDA PHOSPHATES.

Shipments from the Ports.

Below will be found in detail by months the shipments of phosphate rock from the three Florida ports doing a phosphate business. The figures will be of interest. Shipments from Fernandina for the year, January 1, 1894, to January 1, 1895, were as follows:

1894.	Foreign.	Domestic.	Totals.
January.....	8,850	.....	8,850
February.....	2,620	.....	2,620
March.....	13,073	625	13,698
April.....	23,600	.....	23,600
May.....	8,748	.....	8,748
June.....	11,533	956	12,489
July.....	28,018	.....	28,018
August.....	16,557	.....	16,557
September.....	9,626	.....	9,626
October.....	3,003	.....	3,003
November.....	1,800	880	2,680
December.....	1,450	5,270	6,720
Totals.....	127,778	7,731	135,509

The previous shipments from this port are as follows: 1890, 10,428 tons; 1891, 51,300 tons; 1892, 124,950 tons; 1893, 126,800 tons—total, 313,478 tons. The shipments of 1894 were carried by seventy crafts—fifty-seven steamships and thirteen sailing vessels. Sixty of these were for foreign and ten to domestic ports. The largest cargo was 3100 tons. The deepest draft was noted on May 9, when the steamship Bellingham cleared for the port of Aarhus drawing twenty feet nine inches.

The year just past was the best in the history of this port. The shipments here are gratifying to those interested when it is remembered that new lines leading from the territory in which Fernandina is interested have drawn somewhat from its tonnage. The facilities at Fernandina are superior to all other ports doing phosphate export business, the elevator specially constructed for the business being large, well equipped and managed, with a storage capacity of about four cargoes and a ship-loading capacity of 125 tons per hour, the machinery being so arranged as to load from the bins or direct from the cars alongside. During the year the harbor has been greatly improved, and the draft of the vessels outgoing give ample evidence of the substantial benefit of the government work at this point.

Shipments from Punta Gorda for the year, January 1, 1894, to January 1, 1895, were as follows:

1894.	Foreign.	Domestic.	Totals.
January.....	9,556	117	9,673
February.....	.....	900	900
March.....	4,850	1,028	5,878
April.....	13,764	4,043	17,807
May.....	12,761	1,200	13,961
June.....	3,200	.....	3,200
July.....	10,258	2,650	12,908
August.....	15,313	1,910	17,223
September.....	6,560	2,262	8,822
October.....	5,248	.....	5,248
November.....	.....	2,578	2,578
December.....	2,950	1,120	4,070
Totals.....	84,560	17,808	102,368

All of the phosphate shipments from this port are pebble, the bulk being river pebble from the Peace river mines.

Previous shipments from this port were as follows: 1890, 13,880 tons; 1891, 54,849 tons; 1892, 71,116 tons; 1893, 88,467 tons. The increase of the past year was unexpected, in view of the market conditions. The shipments for the present year will, it is thought, exceed the record of 1894, as the new combine of the river companies will greatly stimulate production. The record of 1894 is very flattering to this new and thriving port.

Shipments of phosphate from Port Tampa from January 1, 1894, to January 1, 1895, were as follows:

1894.	Foreign.	Domestic.	Totals.
January.....	2,070	3,382	5,452
February.....	.....	4,570	4,570
March.....	13,281	5,538	18,819
April.....	8,335	2,729	11,064
May.....	16,854	5,376	22,230
June.....	10,867	827	11,694
July.....	10,563	2,493	13,056
August.....	23,360	4,762	28,122
September.....	17,306	4,139	21,445
October.....	14,451	3,426	17,877
November.....	3,929	2,280	6,209
December.....	.....	5,351	5,351
Totals.....	121,016	44,873	165,889

Tons.
Total pebble phosphate shipped..... 94,210
Total hard-rock phosphate shipped..... 71,679

The clearances were eighty-nine in number; of these, fifty were steamships, forty-six for foreign ports and four for American ports. Sailing crafts, thirty-nine; of these, thirty-seven for American and two for foreign ports. Average cargo, sail and steam, 1864 tons. The heaviest cargo was 3412 tons, by the steamship Atlantic, June 12, to Rotterdam. The greatest draft, steamship Freia, May 26, for Genoa, twenty feet eight inches. The month of heaviest shipment was August, with a record of 28,122 tons. The home market took all pebble, 44,873. Of the 121,016 tons going abroad, 71,679 tons were hard rock and 49,337 tons pebble. Germany was the largest consumer, taking about 70,000 tons, the United Kingdom, Holland, Sweden, Denmark, Italy, France and Austria taking the balance. The Bone Valley Phosphate Co.'s shipments exceeded any other company, being 27,129 tons for the year.

Previous shipments from Tampa are as follows: 1890, 1800 tons; 1891, 22,442 tons; 1892, 78,149 tons; 1893, 104,407 tons.

These statistics will show the vast increase in the volume of business from this port in phosphates. It is believed that the shipments for 1895 will be in excess of those of 1894. The record of the year just closed makes Tampa the leading phosphate port in tonnage.

To the shipments from the three Florida ports must be added those from Savannah, Brunswick, and the tonnage by rail to the interior, and the output of the State will exceed 500,000 tons. This makes a splendid showing for the industry. Under the promise "if not better prices, at least of wider margins," the industry takes up the line of march at the threshold of 1895 with hope renewed and confidence strengthened.

NOTES.

The Black River Phosphate Co., at Milledgeburg, near Jacksonville, is running on full time.

The engineers in charge of the coast and geodetic work at Tampa bay have recommended an appropriation of \$3000 for plans for the improvement of the harbor.

Charters for January from Fernandina are: Steamship Teelin Head and steamship, name not given, consigned to the French Company; steamship Glendower to Pickford & Winkfield; steamship Holyrood to B. Arentz & Co., and schooners Warren Adams and Blanche Hopkins to the Pebble Phosphate Co. Tonnage for January estimated 8000.

The Bone Hill Phosphate Co., of Bartow, has been purchasing machinery for the plant southwest of Bartow, and its erection will be rapidly pushed. J. H. JONES.

Phosphate and Fertilizer Notes.

THE British steamship Gleadowe cleared from Savannah last week for La Pallice, France, with 2577½ tons of phosphate, valued at \$25,813.

A SPECIAL from Ocala, Fla., states that Mr. E. W. Agnew and Major Flearnory, who own 160 acres of phosphate land in Marion county, have been very successful in their mining ventures. Messrs. Gustave Thullier and Charles S. Clark have pur-

chased this property, the terms being strictly private.

ALL the phosphate men throughout Alachua county, Fla., who employ free labor met recently and agreed to cut the wages 20 per cent. Many of the men have left, and it is said to be difficult to replace them.

THE following shipments of phosphate are reported from the port of Charleston, S. C., during the week: Barkentine Elmira for Boothbay with 960 tons; schooner Carrie L. Godfrey for Richmond, Va., with 565 tons, and schooner Thomas N. Stone for Wilmington, N. C., with 575 tons.

THE shipments of high-grade Florida phosphate exported from the port of Brunswick, Ga., during the year 1894, as reported by the Brunswick Terminal Co., was as follows: January, 4890 tons; February, 2091 tons; March, 9922 tons; April, 6497 tons; May, 4526 tons; June, 4634 tons; July, 7968 tons; August, 8511 tons; September, 6428 tons; October, 8032 tons; November, 4375 tons; December, 4610 tons, making a total of 72,464 tons.

A SPECIAL from Ocala, Fla., states that the Alachua Phosphate Co., with headquarters near Rock Springs, Marion county, at its annual meeting on the 14th inst. declared its third annual dividend of 5 per cent. on its capital stock. This is one of the phosphate companies of Florida that has paid a dividend every year since it was organized. Mr. Graham, of Gainesville, is general manager, and Edward Heller, of Ocala, superintendent.

THE committee appointed by the convention of Southern fertilizer manufacturers at Charleston recently to confer with the fertilizer manufacturers of Alabama, Mississippi and Louisiana arrived in Montgomery on the 15th inst., and were met by representatives from most of the factories of these States. Those at Mobile, Troy, Eufaula, Jackson, Meridian and all other places having factories were represented except New Orleans. Col. A. D. Adair, of Atlanta; F. B. Hacker, of Charleston, and Henry Fisher, of Newnan, Ga., the committee appointed by the Charleston convention, explained to the meeting that inasmuch as the sale of the fertilizer this year was below the record of last year, it behooved manufacturers to lessen the output. They stated that the judgment of the Charleston convention was that the production should be reduced about one-fourth, and urged that the mills in Alabama, Mississippi and Louisiana would come into the arrangement. It is understood that all the mills, excepting those in New Orleans, agreed, and they not being represented, the committee left for that city to confer with the fertilizer men there. At this time last year 4000 fertilizer tags had been sold by the State of Alabama, and this year only 900 have been disposed of. It is stated that the fertilizer men propose to reduce the price of fertilizer a small amount.

White Phosphates of Tennessee.

By C. W. Hayes, U.S. Geological Survey, Washington.

During the past year much attention has been given in the trade journals to the Tennessee phosphates, and the development of these deposits has been one of the most noteworthy industrial events in the South for 1894. Only a small part of the probably productive area which happened to have transportation facilities has been developed or even thoroughly prospected. The phosphate rock occurs in four distinct varieties. These are (1) black nodular, (2) black bedded, (3) white breccia and (4) white bedded phosphate. Only the first and second varieties have been described, and only the second has been shipped in considerable quantity.

The white phosphates are distinct in their appearance and geological relations from the black phosphate described by Safford, Meadows and Brown. So far as at

present known, the former are confined to a small portion of Perry county, Tenn. There are two distinct varieties of the white phosphate—the breccia and the bedded rock. The breccia consists of a superficial or pocket deposit composed of angular fragments of chert imbedded in a matrix of lime phosphate. It occurs on the hillsides just below the outcrop of the Devonian black shale and black bedded phosphate. It was probably formed by the solution and leaching of the lime phosphate associated with the black shale, and its redeposition in the cracks between the chert fragments everywhere covering the surface. The matrix is a high grade phosphate containing from 75 to 80 per cent. lime phosphate, but the chert (silica) generally makes up about half the mass, so that less than 40 per cent. of the entire rock is phosphate. There is in most cases, however, considerable difference in hardness between the phosphatic matrix and the inclosed chert, so that it seems probable by crushing and screening the two may be at least partially separated, and a product obtained sufficiently high in phosphate to be utilized.

It is more difficult to estimate the quantity of this breccia than of the black bedded rock, but there are probably several hundred thousand tons in sight on Tom's creek and Buffalo river.

The second variety of white phosphate is confined, so far as at present known, to a small area, about one by three miles in extent, on the west side of Buffalo river, in Perry county. It occurs interbedded with rocks of carboniferous age about seventy feet above the top of the black shale. The phosphatic stratum is from thirty to forty feet in thickness, and consists of alternating beds of chert and silicious phosphate. The chert beds are the thinner, and are sometimes wholly wanting in the upper ten feet, so that only about 25 or 30 per cent. of the mass is chert. As shown by thin sections under the microscope, there has been a replacement of the calcite originally contained in the chert by lime phosphate. Analyses of the phosphatic layers show them to contain only from 27 to 33 per cent. of lime phosphate. This is unfortunately too low for utilization by any of the processes now employed in the manufacture of fertilizers. The enormous quantity of this material and the cheapness with which it can be mined will doubtless lead to the discovery of some method by which its phosphoric acid can be made available for plant food.

There is given below a tabular statement of the distribution, composition, etc., of the different varieties of Tennessee phosphates:

TENNESSEE PHOSPHATES.—TABULAR STATEMENT OF DISTRIBUTION, COMPOSITION, ETC.

Variety of phosphate.	Distribution.	Thickness.	Per cent. lime phosphate $\text{Ca}_3\text{P}_2\text{O}_8$.	Development.
1 Black nodular.....	Wherever Chattanooga black shale is found in Tennessee, Georgia and Alabama.	Scattering nodules to beds fourteen inches	50 to 75.	Mined only in connection with stripping underlying rock.
2 Black bedded— (a) Oolitic.....	Swan creek and Totty's Bend, Hickman and Lewis counties.	24 to 40 inches.	70 to 80.	Mined and shipped by four companies since July, 1894.
(b) Coarse sandy..	Skull creek, western part of Hickman county.	12 to 72 inches.	30 to 40.	Partially prospected; not worked; too poor for present working.
(c) Fine sandy..	Tributaries of Tennessee and Buffalo rivers, Perry county.	24 to 80 inches.	45 to 55.	Partially prospected; not worked; available for cheap fertilizers.
3 White breccia.....	Tom's creek and Buffalo river, Perry county.	In superficial pockets.	70 to 80 (Matrix.)	Not worked; utilization depends on possibility of separating chert from matrix.
4 White bedded	Red Bank and Terrapin creeks, Perry county.	30 to 40 feet.	27 to 33.	Not worked; too poor for utilization by present methods of manufacture.

For comparison with Tennessee phosphates there is given below the percentage of lime phosphate contained in the various commercial grades of South Carolina and Florida rock:

	Per cent. $\text{Ca}_3\text{P}_2\text{O}_8$.
South Carolina "river rock".....	50 to 62
South Carolina "land rock".....	55 to 62
Florida "hard rock".....	78 to 82
Florida "land pebble".....	60 to 70
Florida "river pebble".....	60 to 65

A detailed account of the Tennessee phosphates will be published by the United States Geological Survey in the forthcoming volume, Mineral Resources of the United States for 1894.

Iron Markets.

CINCINNATI, January 19.

Nothing has occurred in Western iron markets during the week to break the monotony. Business goes along in a way that would be fairly satisfactory, perhaps, if the trade had not been looking for better things after the new year. Iron is accumulating to some extent both North and South, but the surplus stock is less than it was a year ago, and it would be soon absorbed if an improvement in demand sprung up. When this improved demand is coming is what a good many people would like to know.

Expected orders for cars and railroad supplies continue to be held back in a way that shows that the waiting mood still prevails among railroad officials. The reflection gives some comfort that there will be the more of it when it does come.

The big Blackwell's Island (N. Y.) bridge contract, involving 35,000 tons of steel, and the prospect for many large steel buildings in the cities give promise that there will be a large outlet for the very cheap steel that is now available. The amazing cheapness of construction of iron and steel structures of every kind must stimulate activity to a marked degree as soon as capital acquires a little more confidence.

Current orders for pig iron cover all varieties, and while they are in most cases small in size, there are a great many of them, and the aggregate is at least respectable. There has been no change in prices North or South during the week.

We quote for cash f. o. b. cars Cincinnati:

Southern coke No. 1 foundry.....	\$ 9 75@10 00
Southern coke No. 2 foundry.....	9 25@9 50
Hanging Rock coke No. 1.....	12 00@12 50
Hanging Rock charcoal No. 1.....	16 00@17 00
Tennessee charcoal No. 1.....	14 00@14 55
Jackson county stone coal No. 1.....	14 50@15 00
Southern coke, gray forge.....	8 00@8 50
Southern coke, mottled.....	8 25@8 75
Standard Alabama car-wheel.....	15 75@16 50
Tennessee car-wheel.....	15 50@16 70
Lake Superior car-wheel.....	14 00@14 50

We quote for cash f. o. b. Philadelphia:

Standard Alabama No. 1 X.....	\$11 50@12 00
Standard Alabama No. 2 X.....	11 00@11 50
Strong lake ore coke iron No. 1 X.....	13 50@14 00
Strong lake ore coke iron No. 2 X.....	12 50@13 00
Lake Superior charcoal.....	15 00@15 50
Standard Alabama C. C. C. W.....	18 00@18 50

We quote for cash f. o. b. St. Louis:

Southern coke No. 1.....	\$10 75@11 25
Southern coke No. 2.....	10 00@10 25
Southern coke No. 3.....	9 75@10 00
Southern gray forge.....	9 50@9 75
Southern charcoal No. 1.....	14 00@14 50
Missouri charcoal No. 1.....	12 50@13 00
Ohio softeners.....	14 00@14 50
Lake Superior car-wheel.....	15 50@16 00
Southern car-wheel.....	16 75@17 00
Genuine Connellville coke.....	4 50
West Virginia coke.....	4 50

THE NICARAGUA CANAL.

Reported Stock Sales in Europe Confirmed.

C. P. TREAT,
Telegraph and Cable Address,
"POTENCY, LONDON,"
A. B. C. Code, Fourth Edition,
13 VICTORIA STREET, LONDON, S. W.
Editor Manufacturers' Record:

I have just returned from the Continent, and found here your favor of December 19th with regard to the Nicaragua Canal, which was sent to my office in Chicago.

My position as a possible contractor on the canal makes it a little awkward for me to publish much with regard to any proposition that I may have made to the company. However, I have the success of the enterprise so much at heart, whether I contract on it or not, that I am quite willing to furnish you what facts I can that may be of use.

It is true that I made a proposition to the construction company to build a large portion of the canal; in fact, nearly one-half of it, including locks, dams and all classes of excavation and concrete and masonry work, at the amount of the chief engineer's estimate, the only proviso being that one very large and important dam should be built on the "rock fill" plan, and should contain not less than a certain number of cubic yards of material. This proviso I have no doubt the company would assent to, and it would not materially affect the cost of the work included in the proposal. I made the proposition after a careful examination of the work, and not only made several trips to Nicaragua, taking engineers with me, and passing several times over the whole line of the canal from ocean to ocean at different times of the year, but for the purpose of carefully investigating the questions of climate, health, supply of labor, provisions, and so forth, the kind of camps and tools and machinery that would be required. I went down and built the railway at the eastern end of the canal, from the sea across the swamps to the highland, a distance of about ten miles. We were occupied seven months in doing this work, part of the time during the worst of the rainy season. My superintendent of construction, foremen and mechanics were from the United States. Common labor was composed of negroes from Jamaica and natives from Costa Rica and the western part of Nicaragua. We had a force of about 1000 men at work on the average. Out of that 1000, during seven months, we lost only two men by disease. They were both Jamaicans. One of them died from an old chronic complaint. I satisfied myself fully that there would be an abundance of labor for the eastern half of the canal to be had from the island of Jamaica alone, although many more laborers might be drawn from other of the West Indian islands. For the western half of the canal there is an abundant supply of labor in the Central American States, and better labor for the price I have never had anywhere. If there should be any lack of laborers in the Central American States, more could be drawn from Western Mexico. I was willing to risk enough of my own money, in my opinion, to carry out a contract successfully within the specified time.

As to the statement that "a great contractor once refused to undertake the building of the entire canal for \$400,000,000," I do not credit it at all. I am entirely sure that no such offer was ever made, and that a contract could be made with perfectly responsible people to build the canal at about the engineer's estimate. I consider the work which we did in building the railway across the swamps the most unhealthful that will have to be done in the whole construction of the canal. That part of the railway was built at a cost to the company of about one-half the amount of the chief engineer's estimates.

Some of the best and strongest people on this side have bought stock in the canal enterprise and are ready to follow up their first subscriptions with others of large amounts. Some of the subscribers here are already holders of Suez Canal stock, which, as everyone knows, pays very handsome dividends. There seems to be no doubt that money enough to build the canal as a private enterprise will be forthcoming if the United States government does not take it up. I regret that this letter will be so late in reaching you, but possibly it may be of some use.

C. P. TREAT.

*This was a letter asking for particulars regarding the offer once made by Mr. Treat to build the canal at the estimates made by Mr. Menocal.

Lake Superior Iron-Ore Output.

The output of iron ore in the Lake Superior district for the last three years, according to the Iron Trade Review, was as follows:

	1894.	1893.	1892.
Marquette.....	2,649,167	1,835,893	2,666,856
Menominee.....	1,137,949	1,466,197	2,261,499
Gogebic.....	1,831,086	1,329,464	2,971,991
Vermilion.....	948,513	826,621	1,167,650
Mesabi.....	1,785,839	613,620	4,245
Total.....	7,755,494	6,065,795	9,072,241

THE report of the Blackwell Durham Tobacco Co., of Durham, N. C., for 1894 shows that the business of the company was next to the largest in volume and the largest in the way of profits since the organization of this company. The report shows a very gratifying condition of affairs, and the directors very naturally accord to Mr. Julian S. Carr much of the credit for this prosperity. It is said that the salary of \$10,000 which Mr. Carr is paid is the largest salary paid in North Carolina.

E. A. NIXON, traffic manager of the Memphis Car & Foundry Co., has been elected vice-president of that company, and will hereafter fill both positions.

We quote for cash f. o. b. New York:

No. 1 standard Southern.....	\$11 50@12 00
No. 2 standard Southern.....	11 00@11 50
No. 1 standard soft.....	11 00@11 50
No. 1 foundry lake ore coke iron.....	13 50@14 00
No. 2 foundry lake ore coke iron.....	12 50@13 00
Lake Superior C. C. W.....	15 00@15 50
Southern C. C. W.....	18 00@18 50

ROGERS, BROWN & CO.

Subscribe to the Manufacturers' Record.

Millmen and manufacturers of lumber in this section are in better spirits than usual, on account of the decided change in the general lumber market during the present month. The demand is fairly active, and prices are now about to appreciate, which will be a source of general relief to all in the milling section of Texas. Manufacturers are generally well supplied with orders for timber bills, and there are also a number of inquiries coming to hand daily. The Beaumont Journal, in its review of the market, says: "The bills upon which bids have been invited will be placed somewhere in this section, and it will not therefore take very long to load up all manufacturers, when better prices will come of themselves." There is a fair demand for yard stock, and prices are firm while the dealer is willing to pay the advance in figures. Buyers of timber are also paying a small advance. The export business is also improving, and there are now three vessels at Sabine Pass loading lumber. The Reliance Lumber Co. has recently booked an order for 1,000,000 feet of lumber for Jamaica, and has chartered two steamers to load for that island. The visit of Mr. Thomas L. Nelson, of Boston, previously mentioned, will be productive of many good results. Mr. Nelson is president of the Texas Pine Land Association, which holds over 200,000 acres. These lands are situated in Hardin, Tyler, Jasper, Newton and other counties, Silsbee being the headquarters of the company's tramping operations. The association is now supplying the Reliance Lumber Co., of

this city, with 25,000,000 feet of logs per year, the contract to run five years. These logs are put in the river a short distance above the city, and, as there is some loss from sinkage, the association proposes to erect a mill at Silsbee which will cut all the sinkers. The mill will have a capacity of 50,000 feet per day, with all modern equipments. Mr. Nelson will confer at once with the trustees in regard to the matter. The traffic in lumber at Orange during the past week has been of a fairly active character, and millmen have had to add to the regular loading crews at some of the mills, while all have been pushed to their utmost capacity. The lumber situation is generally firmer, and there is considerable strength to the market, while manufacturers are beginning to feel that there are better times ahead.

Southern Lumber Notes.

THE Hauser, Brenner & Fath Co., Cincinnati, Ohio, is in the market for several cars of whisky-barrel stock; also cypress-tank stock.

THE British steamer Turban cleared for Hamilton, Bermuda, from Wilmington, N. C., with 161,308 feet of lumber and 4000 shingles.

THE O'Neill Manufacturing Co. has purchased the entire output of the two saw mills owned by Mr. A. C. Morrison, of Rome, Ga.

BOTH the saw mills at Carabelle, Fla., are now running on full time and have arranged for a large output. There are now twenty-two vessels in port, all of which are waiting for cargoes of lumber.

THE hickory-fibre brush factory of Huntsville, Ala., began operations last week, and on the 18th inst. shipped the first carload to New York. This is the first make of this material in the State, if not in the South. Chicago capital and men are interested and operating the factory.

THE Emporia Mills Co., located on the Houston, East & West Texas Railroad, 100 miles from Houston, Texas, owned by Messrs. Jarvis & Carter, of Houston, have closed a contract with Messrs. J. A. Fay & Egan, woodworking machinery, for a large planing mill to be put in as soon as the machinery can be shipped.

A SPECIAL from Riverside, Ala., states that the Lathrop-Hatten Lumber Co. has just purchased six new logging skeleton cars to run on its railroad at Greensport, Ala., which is headed southwest towards Birmingham, being virtually an extension (west of the Coosa river) of the Laney, Piedmont & Birmingham Railroad. This company now has large quantities of logs.

A DISPATCH from Panasoffkee, Fla., states that a reorganization of the Cypress Mill Co. at that place is among the probabilities of the near future. Important additions to the machinery of the mill are now being made, and, when completed, will add to its capacity for first-class work. A railroad from the mill to the swamp will soon be completed, which will furnish logs to keep the mill running independent of river facilities.

THE Reliance Lumber Co., of Beaumont, Texas, has secured the contract for supplying the ties and bridge timbers from Georgetown to Darilla, on the Georgetown & Trinity Railroad. The contract requires that delivery of material commence on February 20, and the aggregate cost of material called for will be about \$50,000. The grading of the road between Georgetown and Granger is progressing rapidly, and the roadbed will be ready for the ties by the middle of February.

THE Mechanics, Dealers and Lumbermen's Exchange of New Orleans held its annual meeting in that city last week, at which the officers for the ensuing year were elected. The following officers and directors were chosen to direct the move-

ments of the exchange for 1895: President, James M. Aitkin; vice-president, A. S. Blaffer; treasurer, William Roberts; directors, Jules Koch, Julien Swoop, Charles J. Babst, C. W. Fohlman, Victor Lamban, Thomas Steen, G. M. Leaby, G. C. Cusachs and F. J. Mathew.

A LETTER from Alexandria, La., states that eight saw-mill proprietors on the Houston Central & Northern Railway met in that city on the 19th inst. and organized the Enterprise Lumber Co., Limited, with a capital stock of \$100,000, for the purpose of conducting a general merchandise and saw-mill business, with headquarters at Nugent, Grand parish. The officers elected were J. M. Nugent, president; W. L. Kidd, vice-president; E. J. Hardtner, secretary and treasurer; H. S. Crow, T. C. Barron, J. Q. Prestridge and T. W. Boseborough, directors.

THE committee on rates of the Southern Cypress Lumber and Shingle Association met last week in New Orleans to consider the question of the complication of railroad rates on lumber to the different cities and towns in which the association sells its product. The object was to secure from the different roads leading out of the State a book of rates compiled in such a manner as to inform the lumbermen at a glance the rate upon their cypress to any part of the country. The committee perfected the scale and manner in which the change in existing methods is desired and will submit it to the railroads. No demand was made that the rates should be lowered.

THE lumber interests of Arkansas, representing an annual output of \$20,000,000, were well represented by the body of delegates which assembled at Little Rock last week. The delegates comprised the bone and sinew of the State Lumbermen's Association. After transacting a variety of business of a technical nature, the association elected the following officers for the ensuing term: L. J. Best, of Cotton Belt, president; C. W. Gates, of Fordyce, vice-president; F. R. Pierce, of Dalville, secretary, and Max Nelson, of Malvern, treasurer. Arrangements have been perfected to escort retail lumber dealers of Ohio and Western Pennsylvania over the State the latter part of the present month on a tour of inspection.

A MEETING of lumber manufacturers and dealers was held in Baltimore last week at the Carrollton Hotel and the Southern Dressed Lumber Association organized. The objects of the association are said to be the promotion of the interests of those engaged in working or marketing North Carolina and South Carolina pine lumber, and the maintenance of uniform prices and grades. Mr. John L. Roper presided at the meeting, and Mr. Thomas W. Smith acted as secretary. Among the representatives of lumber firms present were the following: Goldsborough Lumber Co., of North Carolina; the Blades Lumber Co. and the Toadvine Lumber Co., Elizabeth City, N. C.; Tunis Lumber Co., Maryland and Virginia; Campbell Manufacturing Co., Virginia; West Norfolk Lumber Co., Norfolk, Va.; Albemarle Lumber Co., Philadelphia and Elizabeth City, N. C.; Pease United Lumber Co., Springfield, Mass.; White Oak River Corporation, Stella, N. C.; John L. Roper Lumber Co., Norfolk, Va.; Jackson Bros., Salisbury, Md.; E. W. Alderman, Alcholu, S. C.; Parmele, Eccleston & Co., New York city; George Tyler, Thiemeyer & Co., E. W. Horstmeier & Co., Otto Duker & Co. and George F. Sloan & Co., of Baltimore. The following officers were elected: President, John L. Roper, Norfolk, Va.; vice-president, Theodore L. Pease, Springfield, Mass.; treasurer, W. R. McCabe, Norfolk, Va.; secretary, Horton Corwin, Jr., Philadelphia. The directory comprises the gentlemen named as officers and Messrs. Thomas W. Smith, of Washington, D. C.;

R. J. Camp, Franklin, Va.; E. A. Parmele, New York; N. A. Numatt, Washington, D. C.; W. H. Jackson, Salisbury, Md.; James B. Blades, Elizabeth City, N. C.; D. W. Alderman, Alcholu, S. C.; Theodore Tunis and George F. Sloan, of Baltimore. A constitution and by-laws, with price-lists, as submitted by a committee composed of Messrs. Roper, Camp and McCabe, were adopted. The official name of the organization is the Southern Dressed Lumber Association, and the office in Norfolk, Va., where a directors' meeting will be held on the 26th inst.

Ramie Culture in Florida.

The Perseverance Fibre Co., of New Orleans, writes the MANUFACTURERS' RECORD that it has begun the cultivation of ramie in the vicinity of Tallahassee, Fla., and hopes to have a crop from 500 acres this year. A decorticating and bleaching plant will be put in for treating the fibre, and the company adds that the mill of McDonald will be doubled in capacity for the same purpose. Most of the machinery, it is stated, will have to be imported. From ramie fibre an excellent substitute for linen can be made, which is very durable and of excellent finish. John J. Barr is president of the company, and J. C. Donovan, secretary.

A NEW industry at Greenville, S. C., is a broom factory, which, it is said, is doing an excellent business. The company proposes to buy all the broom-corn in its section of the State, and it is expected that the demand will start up the industry of growing broom-corn, and farmers will have a new "cash crop."

TRADE NOTES.

THE M. A. Furbush & Son Machine Co. has on order two new worsted cards for Messrs. E. T. Steel & Co., Bristol, Pa.; also some woolen machinery for Messrs. Beckman & Co. and the F. Muhlhauser Co., both of Cleveland, Ohio.

F. F. PLUMMER, of Norwich, Conn., traveling representative of the Berry & Orton Co. in the South, met with a severe accident at Jacksonville, N. C. While hurrying to the depot to catch a train he fell and received a bad scalp wound.

A LIST of woodworking machinery is offered for sale by R. T. Turner, Jr., of Betterton, Md., in our advertising columns. It includes machines of standard make in good working order, and prices at which they will be sold are named in the card.

THE Pettie Machine Works, Newton Upper Falls, Mass., has received an additional order for drawing-frames from the Lynchburg Cotton Mill Co., Lynchburg, Va.; also an order for revolving flat cards and drawing-frames from Edwin Bartlett, of North Oxford, Mass.

A NUMBER of tracts of coal and farm lands are offered for sale elsewhere in our advertising columns by A. J. Cooke, of Cumberland, Miss. Over 18,000 acres of coal lands in West Alabama are included in the list, and persons contemplating such investments should investigate the opportunities presented.

AMONG the concerns which have lately added to their equipment the improved upright power hammer made by Scranton & Co., 356 Congress avenue, New Haven, Conn., are: Adriance, Platt & Co., Poughkeepsie, N. Y.; Seymour Manufacturing Co., Seymour, Conn.; Hatch & Holmes Manufacturing Co., Bridgeport, Conn.; Bradley & Hubbard Manufacturing Co., Meriden, Conn.

THE Laurel Hill Association at Stockbridge, Mass., has awarded the contract for a concrete arch of 100 foot span over the Housonatic river to Ice Glen, to the Melan Arch Construction Co. Plans and specifications have been drawn by Mr. Fr. von Emperger, constructing engineer, 71 Broadway, New York city. It will be built as soon as the season will permit, and will be the largest concrete arch in this country.

THE Foster Engineering Co., of Newark, N. J., reports a rapidly-increasing demand for its new "Class W" steam pressure regulators. Among orders just booked for large valves are mentioned one 10 inch for the Lehigh Valley Railroad Co. coal mines; three eight-inch and one five-inch for the Watts Campbell Co. for use at the Newark electric-light and power station; one six inch for the U-street pumping station, Washington,

D. C.; one five-inch for Dixon's Paper Mills, and two six-inch and two four-inch for the new American liner "St. Louis." These latter are in addition to twenty regulators from eight to four inches furnished for that ship in December.

THE Daugherty typewriter is meeting with much success. Its simplicity and correct mechanical details are commending it to more general adoption. As a result of this growing popularity the manufacturer, the Daugherty Typewriter Co., 21 Sixth street, Pittsburg, Pa., will shortly build a modern and well-equipped factory. The additional facilities thus secured will permit the marketing of a better finished machine.

ATTENTION has been called to the fact that the well-known firm of Morris, Tasker & Co., Philadelphia, Pa., pioneers in the manufacture of wrought-iron and steel-pipe poles for electric railroads, has recently begun manufacturing special gun metal castings and fittings for power plants. Highly satisfactory results have been experienced with this product, and some large orders have been filled. The firm has also received some of the largest contracts for poles given out recently.

A NOTABLE record for quick work, which emphasizes the value of a fully-equipped establishment and a well-trained corps of workmen, was recently made at the foundry and machine works of H. H. Lane, Huntingdon, Pa. As a regular thing this concern keeps a large stock of steam engines on hand, so as to fill orders promptly. Lately, however, it was caught short on one size, viz, twenty five horse-power, and three orders were received in one week for this size, all wanted quickly. The record was made with the first order on Monday, January 14. Shortly after 7 o'clock on Monday morning the bed or main casting of a twenty-five horse-power engine was taken from the foundry to the machine shop and there put through the various processes of boring, turning, planing, drilling and tapping. All this was done and the various parts of the engine assembled and put together, and before 5 o'clock the next morning the engine was under steam and running in Mr. Lane's works, and the painter had watched his chance and got two coats of paint on it. During that day (Tuesday) the engine was thoroughly tested, and by evening had received two more coats of paint and a coat of varnish, and the next day the engine was taken to a nearby town and placed in position, the pipe connection made and the engine started to work that evening. With such rapid record there was also attained a degree of efficiency that is also noteworthy. This engine had a steam cylinder ten inches diameter and 12 inch stroke. The engine which had been doing this work before was 10-inch and 18-inch, so that the new engine was only two-thirds as large as the old engine, and yet we are informed that the new engine runs all the machinery in the mill, and does it easier and with less steam than the old engine would with half the machinery on, as the old engine would not haul all the machinery at once, and only half of the mill could be run at once.

TRADE LITERATURE.

AN artistic calendar from the L. & I. White Co., Buffalo, N. Y., manufacturer of edge tools, gives a view of Niagara Falls by moonlight and of the factory of this company.

AN attractive reproduction of "The First Cloud" is the feature of a calendar from J. S. Blackburn, Hattiesburg, Miss., manufacturer and dealer in long-leaf yellow pine lumber.

MOUNTED on a heavy card an attractive calendar is sent out by George Draper & Sons, of Hopedale, Mass. An engraving shows the latest 49D spindle being introduced by this firm.

A VIEW of the cruiser New York is shown on a calendar issued by the Wheeler Condenser & Engineering Co., 39 and 41 Cortlandt street, New York city. This cruiser is supplied with Wheeler surface condensers for all of her auxiliary engines. The United States cruisers Columbia, Minneapolis, Brooklyn, Marblehead, Montgomery, Detroit and Dolphin, and the battleships Massachusetts, Indiana, Iowa and Texas are also equipped with Wheeler auxiliary surface condensers.

A CATALOGUE of labor-saving tools and machines has just been issued by Wells Bros. & Co., of Greenfield, Mass. It contains 120 pages and is neat in arrangement and size. The list of tools and machinery is especially large, and many useful new devices are to be noted in the catalogue. This firm is the manufacturer of the "Little Giant" screw-plates, adjustable pipe-plates, taps and tap holders, dies, reamers, ratchet tap wrenches, countersinks, brace bolt pointer, nut wrenches, bit braces, hand bolt cutters and nut tappers, drilling machines and many other ingenious labor-saving tools that are given generous preference by experienced mechanics. The catalogue is fully illustrated and will be sent on application to any dealer or user of this class of tools.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

*Means machinery is wanted, particulars of which will be found under the head of "Machinery Wanted."

†In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

It is reported that Philadelphia and Massachusetts parties contemplate building a \$300,000 cotton mill in the South for weaving fine grade ginghams.

ALABAMA.

Bessemer-Steel Plant.—The Fort Payne (Ala.) steel plant has been sold to the company previously reported which Henry F. De Bardeleben and others will organize. The plant will be removed to Fort Payne and considerable machinery added.

Birmingham-Books.—The Webb Book Co. has been incorporated with \$2500 capital stock by John M. Webb, G. S. Webb and Z. T. Rudolph.

Birmingham-Flour Mill.—The Commercial Club is in correspondence with the Alton (Iowa) Milling Co., which is said to contemplate removing its mill to Birmingham.

Birmingham-Mattress Factory.—The Birmingham Mattress Co. will double the capacity of its factory.

Birmingham-Spice Mill.—A Sioux City (Iowa) party contemplates building a coffee and spice mill. Address Commercial Club.

Cedar Bluff-Chair Factory.—J. B. Stone will convert his saw mill into a chair factory.

Florence-Bridge.—The Louisville & Nashville Railroad Co. (office, Louisville, Ky.) will probably build a bridge across the Tennessee river.

Glasgow-Grist Mill and Gin.—G. W. Searcy will erect a cotton gin and grist mill.

Guntersville-Grist Mill.—J. A. M. Kinstry has put in a grist mill.

Huntsville-Woodworking Plant.—N. M. Johnson will establish a woodworking plant. Address care of P. J. Kaufman.

Ozark-Cotton Mill.—The Ozark Cotton Mill Co. has been organized to erect a mill; capital stock \$50,000.

Ozark-Handle Factory.—G. P. Dowling will start a handle and spoke factory.

Ozark-Handle Factory.—The G. P. Dowling Hardware Co. will establish a handle and spoke factory.

Ozark Cannery.—B. & M. Dowling contemplate putting in a cannery.

Selma-Water Works.—The Selma Water Co. will lay two miles of four and six inch mains.

Tuscaloosa-Cotton Mill.—The Tuscaloosa Cotton Mill will put in fifty new looms.

ARKANSAS.

Moorefield-Flour Mill.—John G. Hazelrigg will build a roller-process flour mill.

Searcy-Lumber Mill, Foundry, Machine Shops, etc.—The Searcy Milling Co. has been incorporated as the Searcy Manufacturing Co. with A. W. Yarnell, president, and R. W. Carnes, secretary and treasurer. Capital stock is \$50,000, with \$10,000 paid up. This has heretofore been operating a planing mill alone, but will put in sash and door machinery and will add complete machine shop and foundry, etc.

FLORIDA.

Quincy-Water Works.—A system of water works will be contracted for.

Quincy-Water Works.—The Quincy Water Works Co. will construct a system of water works; plans and specifications prepared.

San Antonio-Water Works.—J. Francis Le Baron, of Jacksonville, has prepared plans for a system of water works.

Tampa-Ice Plant.—J. M. Long will enlarge his

building and put in an additional 15 ton ice machine.

Victoria-Irrigating Plant.—Mr. Craft will put in an irrigating plant on his orange plantation.

GEORGIA.

Acworth-Cotton Mill.—A movement is afoot for the erection of a cotton mill. Address J. L. Lemon.

Atlanta-Bridge.—The report of the finance committee appropriates \$25,000 for the new Broad-street bridge. Address the mayor.

Atlanta-Railroad Shops.—In order to triple the size of the Southern Railway Co.'s shops, as stated last week, a spacious new machine shop 90x120 feet and warehouse will be built, and when in full operation 1000 hands will be employed.

Barnesville-Mercantile.—I. C. Collier, J. C. Collier, W. E. Adams and F. M. Stephens have incorporated the J. C. Collier Co. for mercantile purposes; capital stock \$30,000.

Canton-Gold Mines.—J. H. Brown, of Rural Retreat, Va., has purchased a half-interest in the A. B. Coggins gold mine, and operations will be pushed.

Canton-Gold Mine.—J. O. Robertson is opening a gold mine near Canton.

Dahlenega-Gold-stamp Mill.—General Murray will erect a stamp mill near Park Spring.

Dahlenega-Gold Mine.—Henry McManus, of New York, is examining the Garnet Mining Co.'s gold mines, and operations may be resumed.

Dahlenega-Gold-mining.—F. W. Batdorf, of Grand Rapids, Mich., and associates may engage in gold-mining near Cedartown.

Elberton-Gold Mine.—Gold-mining may be started in Elbert county. McCurry Bros. can be addressed.

Experiment-Creamery.—A creamery will probably be built. Address H. J. Wing.

Harmony Grove-Foundry and Machine Shop.—N. W. Perkins is building a foundry and machine shop.

Jakin-Saw Mill.—Bivins Bros. are building a saw mill of 40,000 feet capacity daily.

Macon-Fertilizer Works.—The American Fertilizer Co., noted last week as incorporated, will erect works in the summer; A. M. Rodgers, president.

Macon-Land etc.—Geo. A. Smith, R. A. Nesbit, R. E. Park and others have incorporated the Georgia Land & Title Co. with a capital stock of \$20,000.

Macon-Mercantile.—Louis W. Wood, Walter H. Turpin and W. H. Woodson have incorporated the E. P. Strong Shoe Co. for mercantile purposes; capital stock \$19,000.

Nacoochee-Gold Mines.—Charles, Edmund and Jos. H. Roberts have incorporated the Nacoochee Hills Gold Mining Co. for mining purposes; capital stock \$100,000.

Orange-Gold Mine.—A Mr. Chester, of Buffalo, N. Y., and associates have purchased and will develop the Latham property near Orange.

Rome Cotton Mill.—A report says that a Northern company will erect a \$600,000 cotton mill.

Savannah-Bottling Works.—The Habenicht Bottling Works, at Columbia, S. C., will be removed to Savannah and operations enlarged.

Sunny Side-Woodworking Factory.—Mr. Van Dyke will put in tub manufacturing machinery.

Tifton-Iron and Brass Foundry.—H. H. Tift and others will incorporate a company to establish iron and brass foundry and machine works; capital to be \$10,000.

Tifton-Marble Works.—Wm. McClure contemplates starting marble works.

Valdosta-Telephone Line.—J. D. Whitlaw is endeavoring to secure the establishment of a telephone line.

KENTUCKY.

Greenville-Water Works.—The city contemplates constructing water works. Address the mayor.

Kuttawa-Water Works.—The city has let contract for a system of water works. Address the mayor.

LOUISIANA.

Algiers-Dry dock.—The sub-committee of the appropriation committee on naval affairs, Washington, D. C., has incorporated in its proposed appropriation bill the sum of \$100,000 to commence work on the Algiers dry dock.

Baton Rouge-Cotton Compress.—It is proposed to organize a company to erect a \$50,000 cotton compress and subscriptions are now being solicited. Address C. J. Reddy.

Crowley Canal.—A. R. McMurphy & Co., of Marshall, Ind.; Bruce & Arnold, of Greencastle, Ind.; John B. Wright, W. W. Dusen, of Crowley, and others have organized the Chickamauga Canal Co. to construct an irrigating canal.

Louisiana-Saw Mill.—H. E. Rohn, 163 South

Water street, Chicago, Ill., will build a saw mill in Louisiana.

New Orleans-Abattoir, etc.—The New Orleans Abattoir & Stock Landing Co. has been chartered by A. J. Forstall, Pierre Lanoux, John W. West-erfield and others; capital stock \$250,000.

Nugent-Lumber Mills.—The Enterprise Lumber Co. has been organized to operate mills with a capital stock of \$100,000. J. M. Nugent is president; W. L. Kidd, vice president, and E. J. Hardtner, secretary-treasurer.

Pointe Coupee-Sugar-house.—The Pointe Coupee Planting & Manufacturing Co. will erect a new and larger sugar house plant to replace the one recently burned.

Shreveport-Baking-powder Factory.—It is proposed to erect a \$10,000 or \$15,000 baking-powder factory. Aug. Mayer can be addressed.

White Castle-Sash and Door Mill.—The White Castle Lumber Co. is about to add a sash, door and blind plant to its mill.

MARYLAND.

Baltimore-Packing-house.—S. W. Allerton and W. S. McCrea, of Chicago, contemplate establishing a packing-house in Baltimore.

Baltimore-Tin-can Works.—The Hughes-Taylor Can Co., for manufacturing tin-cans and can-making and canning machinery, has been incorporated by Charles J. Hughes, Isaiah H. Taylor, Peter F. Winebrenner and Henry C. Winebrenner. The capital stock is \$30,000.

Baltimore-Lumber Mill.—The Tunis Lumber Co.'s mill at Canton has shut down for repairs to buildings and machinery.

Baltimore-Vehicle Works.—The People's Vehicle Repair Co., for repairing wagons, has been incorporated by George W. Barkman, Jacob G. Hartman, Andrew Popplein, Charles D. Blake and Frank V. Rhodes. The capital stock is \$10,000.

Baltimore-Power Plant.—The Hermange Power & Building Co., for conducting a real-estate and power-plant business, has been incorporated by Oliver F. H. Warner, Leopold H. Wieman, Edmund V. Hermange, John F. Bruns, J. Fred. Re-quardt and Wallace L. Ball. The capital stock is \$50,000.

Conowingo-Water-power Plant.—Jos. H. Howell, engineer, is making surveys for the Susquehanna River Electric Co.'s proposed water-power plant.

Contees Station (P. O. Laurel)-Brick and Terra-cotta Works.—A \$50,000 stock company will erect brick and terra-cotta works.

Cumberland-Tinplate Mill.—The Cumberland Tinplate Mill has resumed operations.

Elkton-Water-power.—It is proposed to develop the water-power on Joseph Richard's property and erect electric plant.

Frederick-Iron and Wood Works.—L. C. Stalnaker, of Martinsburg, W. Va., is endeavoring to locate an iron and woodworking plant in Frederick. It is proposed to employ 100 skilled mechanics.

Hagerstown-Pneumatic Wheel Works.—The Crawford Wheel & Gear Co. of Washington County has been incorporated with a capital stock of \$100,000 to manufacture pneumatic-tire wheels for buggies and wagons. The incorporators, who are the directors for the first year, are Wm. H. Crawford, Robert S. Crawford, George D. Crawford, Charles T. McCue, Charles H. Carlisle, of Hagerstown; L. B. Whimper, Brooklyn, N. Y. The factory is in operation.

Hagerstown-Silk Mills.—The Maryland Silk Mills has been improved during the late strike.

Hyattsville-Bridge.—The construction of a bridge is proposed over the Western branch. Address the Citizens' Improvement Association.

Oxford-Improvement Company.—The Isle of Avon Improvement Co. has been incorporated by Edwin M. Wilmer, Perry G. Buckingham, Luke T. Pearce, Charles H. Hepburn and Charles J. Wiener. The company will improve land on the Isle of Avon. The capital stock is placed at \$50,000.

Princess Anne-Water Works.—A system of water works will be constructed. Address Thomas H. Bock, committee.

Washington, D. C.-Paving, etc.—The Columbia Paving & Supply Co., for the furnishing of several kinds of paving, including artificial stone, has been incorporated with a capital of \$1000 by Simon P. Gross, William H. Lepley and William S. McCarthy.

Washington, D. C.-Publishing, etc.—The Patriotic American Co. has been incorporated for printing and publishing with John H. Webb, president, and Jos. W. Morton, Jr., secretary-treasurer; capital stock \$150,000.

Washington, D. C.-Wine, etc.—The California Wine & Fruit Co. has been chartered to deal in wine and fruit with Thos. Francis, Jr., president, and Geo. M. Linthicum, vice president; capital stock \$10,000.

MISSISSIPPI.

Arcola-Mercantile.—Sol Moyses and J. O'Neal, of Chattanooga, Tenn.; A. D. Daniel, John T. Sims and Max Moyses have incorporated the Chattanooga Planting & Mercantile Co. with a capital stock of \$5000.

Greenville-Water Works.—Nisbet Wingfield, John R. Ellis, James M. Reed and John L. Wingfield have incorporated the City Water Co. to construct and operate water works. The capital stock is \$50,000.

Lumberton-Telephone Line.—The Lumberton & Columbia Telephone Co. has been organized to construct a system.

Pelahatchee-Lumber Mill, etc.—Captain Grimes will erect a saw mill, cotton gin, rice huller, cane mill, shingle mill, handle mill, etc.

MISSOURI.

Fayette-Water Works.—The city contemplates building water-works system. Address the mayor.

Fulton-Water Supply.—A new well will be sunk and a new pump installed. Address Chas. MacDonald, superintendent.

Jefferson City-Flour Mill and Elevator.—The G. H. Dulle Milling Co. will rebuild its \$100,000 flour mill and grain elevator.

Kansas City-Telephones.—The Interstate Telephone Co. has been incorporated lately with a capital stock of \$100,000. C. B. Riley is president; George McLean, secretary, and George J. Twiss, general manager.

Kansas City-Stove Works.—R. M., A. M., O. A. and R. A. Clark and H. N. B. Umbach will incorporate a company of \$50,000 cash capital and establish a plant for the manufacture of steel ranges at Arnold's. The company will use the old Armourdale Foundry Co.'s plant, erect a 55x128 foot foundry and employ between fifty and 100 workmen, making forty ranges daily. About \$40,000 will be invested in buildings and machinery at once. R. M. Clark is president, and Mr. Umbach, secretary-treasurer; office, 704 Main street.

Kansas City-Cooperage.—The Western Cooperage Co. has purchased and will improve the S.W. Day cooperage plant; capital stock \$10,000.

Kansas City-Dispatch.—The Southwestern Millers' Dispatch Co., capital \$2000, has been incorporated by D. S. Kirk, W. H. Waggoner and others.

Kansas City-Saw Mill.—Earle & Prouty, of Des Moines, Iowa, contemplate building saw mills in Kansas City.

Kirksville-Laundry.—R. A. Roddy & Co. have established a steam laundry.

Richmond-Water Works.—The city will construct water works. Address the mayor.

Sheffield-Mercantile.—The People's Store Co., capital \$5000, has been incorporated by I. C. Poves, Benjamin Sturgis, R. C. Howes, S. V. High and J. J. Phare.

St. Charles-Quarry.—The Thompson & Gray Quarry Co., capital \$10,000, has been incorporated by J. W. Thompson, John Gray, Jules Bertero, A. F. Mispalet, Theodore Bruene and Otto J. Martin.

St. Louis-Realty.—The Balsen Realty & Building Co. has been incorporated with an all-paid capital stock of \$50,000 by W. L., W. S. and Ella S. Balsen. The object of the corporation is the buying and selling of real estate.

St. Louis-Plumbing.—The Broadway Plumbing Co., capital \$2000, has been incorporated by J. M. Life, J. J. Shaw and F. F. Bond.

St. Louis-Real Estate.—The Cabanne Arcade Co. has been incorporated with a capital stock of \$10,000 by Joseph T. Donovan, Charles Cunliff, Ben Cunliff, Joseph M. Donovan and Daniel H. Donovan.

St. Louis-Construction.—The Baldorf Construction Co., capital \$2000, has been incorporated by Harry and Helen C. Baldorf, Julia L. Rood, J. S. Rood and T. C. Vance.

St. Louis-Telephones.—The Missouri Telephone Manufacturing Co., capital stock \$2000, has been incorporated by Isidor J. Kusel, Russell Parker and George J. Chapman.

St. Louis-Realty.—The Annie Payne Realty Co., \$5000 capital, all paid, has been incorporated by William Jami son, Jennie A. Thompson and Violet M. E. Fleming.

St. Louis-Coal Company.—The Texas Coal Co., capital stock \$2000, has been incorporated by E. F. Hobart, W. P. Heath and C. B. Dawley.

St. Louis-Meal.—The Wilbur Seed Meal Co. has been incorporated with a paid capital of \$5000 by F. B. Wilbur, A. J. Grant, R. J., D. L. and C. J. Morrison.

St. Louis-Milling.—The Engleke & Feiner Milling Co. has been incorporated with a full-paid capital stock of \$140,000 by Frank Feiner, William Klenger and George Feiner.

St. Louis-Telephone Manufacturing.—The Mis-

souri Telephone Manufacturing Co. has been incorporated with a capital of \$2000 by I. J. Kusel, Russell Parker and C. Chapman.

St. Louis—Wine.—The California Wine Co. has been incorporated with a capital of \$15,000 by J. C. W. Meyer, J. C. W. Schnell, Jacob Frank, Jr., and John A. Stickfort.

NORTH CAROLINA.

Bridgewater—Furniture Factory.—J. R. Rust, Jr., contemplates establishing a furniture factory.*

Charlotte—Can Factory.—The Cannery Association has about made arrangements for the location of a tin-can factory.

Charlotte—Cotton-machinery Works.—James Leslie & Co., of Montreal, Canada, noted last week, will establish in Charlotte a plant for manufacturing card clothing, leather belting and loom reeds. Work on new building will be commenced at once. About \$20,000 will be invested.

Charlotte—Chlorinating Plant.—The Mecklenburg Iron Works will build a complete Theis chlorinating plant for treating gold.

Durham—Ice Factory.—Geo. R. Jarman is building an ice factory; machinery arranged for.

Durham—Cotton Mill.—The Erwin Cotton Mills is extending its dyehouse.

Fayetteville—Cotton Mills.—The erection of two cotton mills is talked of.

Forest City—Flour Mill.—H. W. Hoon expects to build a roller-process flour mill.*

Greensboro—Medicine Factory.—A company has been organized to manufacture a patent medicine; N. R. Bowman, of Lynchburg, president; J. F. Jordan, vice-president, and E. L. Gilmer, secretary, both of Greensboro.

Henderson—Telephone Exchange.—A movement has been started to secure a telephone exchange.

Kinston—Lumber Mill.—The Kinston Lumber Co. will rebuild its mill.

Morganton—Pottery, etc.—Governor Carr in his annual message recommends the establishment of a pottery and printing works at the Deaf and Dumb Institute.

New Berne—Lumber Plant.—The Stimson Lumber Co.'s mill improvements will include a 250 horse-power engine, two boilers of 125 horse-power each, and considerable other machinery.

Raleigh—Cotton Mill.—The Caraleigh Cotton Mills will put in more spindles and looms.

Raleigh—Planing Mill.—The Mills Manufacturing Co. will erect a planing mill of 10,000 to 15,000 feet daily capacity.

Reidsville—Cotton Mill.—The Hermitage Cotton Mill has been bought in by a syndicate representing the creditors.

Rockingham—Lumber Mill.—Robert L. Steele will erect a lumber mill.

Salisbury—Mercantile.—The Brown Clothing Co. has been organized with a capital stock of \$25,000; M. S. Brown, president.

Shelby—Cotton Mill.—A plan is afoot for the erection of a \$200,000 cotton mill. T. D. Lattimore and E. Y. Webb are interested.

Wilmington—Woodworking Plant.—A movement is afoot for the establishment of a plant for manufacturing baskets, crates and brooms.

SOUTH CAROLINA.

Almeda—Saw Mills.—The Southern Land & Timber Co. has purchased 10,000 acres of land, and will erect saw mill to cut the timber on same. Information furnished by W. R. Smith.

Batesburg—Cotton Mill.—The Batesburg Cotton Mill has increased its capital stock from \$50,000 to \$100,000, and will at once put in the machinery for its plant.

Camden—Cotton Mill.—The Camden Cotton Mills is to put in new machinery.

Clover—Monazite Mine.—A company may be formed to develop a monazite mine. Address G. R. Turner.

Columbia—Cotton Mill.—Application will be made for a charter for the Richlands Mill Co. to erect a cotton mill; capital stock to be \$150,000. The incorporators are B. S. Whaley, W. A. Clark, Wm. Jones, R. S. Desportes, W. B. Lowrance and R. W. Shand.

Columbia—Grist Mill, etc.—The Palmetto Milling & Commission Co., just incorporated, will erect corn and grist mill.*

Fodder—Gold Mine.—L. R. Williams has opened a gold mine.

Greenville—Cotton Mill.—The proposed new cotton-mill company, already noted, in which F. W. Poe is interested, has applied for charter under the name of the F. W. Poe Manufacturing Co. F. W. Poe, Frank Hammond, Wm. Wilkins and others are incorporators; capital stock \$250,000.

Mt. Pleasant—Water Supply.—Boring artesian wells for additional water supply is talked of. Address the mayor.

Mt. Pleasant—Artesian Well.—The city will sink an artesian well. Address T. H. J. Williams.*

Spartanburg—Bobbin Factory.—Fowler & Robertson have established a bobbin factory.

Union—Telephone Line.—W. D. Arthur will establish a telephone line and exchange.*

Yorkville—Gold Mine.—G. R. Wallace will develop the old Chambers gold mine.

TENNESSEE.

Blountville—Creamery.—A creamery is talked of.

Hopkinsville—Water Works.—The city has let contract for the construction of a system of water works to Jesse W. Starr, of New York.

Jellico—Coal-mining, etc.—W. H. Fizer's bid on the Indian Mountain Coal & Coke Co.'s property, noted last week, was raised and bid in by S. B. Luttrell, of Knoxville, Tenn.

Knoxville—Flour-bag Factory.—The City Mills will put in machinery for manufacturing 5000 flour bags daily.

Morristown—Telephone System.—J. B. Cox, of Knoxville, intends to establish a telephone system.

Nashville—Saw Mills.—Cook Bros. have leased the Nashville Lumber Co.'s mills, and will repair and operate same.

TEXAS.

Alvin—Pickle Factory.—It is proposed to establish a pickle, cider and catsup factory.

Austin—Coal Company.—The Santo Tomas Coal Co., of Webb county, capital stock \$30,000, has been chartered; incorporators, R. P. Walker and others.

Coleman—Water Works.—The city council has passed an ordinance to build a system of water works on the contract plan, and will at once employ a competent engineer to make plans and specifications, and advertise for bids in the near future. Address the mayor.

Dallas—Publishing.—Jno. F. Elliott, Herbert Price and James A. McAleer have incorporated the Times-Herald Publishing Co. with a capital stock of \$50,000.

Ennis—Reservoir.—J. S. Thatcher, of Dallas, has prepared plans for an impounding reservoir of 175,000,000 gallons capacity.

Hillsboro—Machine Shop.—The Missouri, Kansas & Texas Railroad will build a 30x49 feet machine shop and office building.

Lampasas—Broom Factory.—The Farmers' Alliance is planning for the establishment of a broom factory. A. F. Baker is secretary.*

Silsbee—Saw Mill.—The Texas Pine Land Association (office, Boston, Mass., Thos. L. Nelson, president) will probably build a saw mill of 50,000 feet daily capacity.

Uvalde—Irrigation Canal.—The Uvalde Irrigation, Manufacturing & Water Supply Co. is about to commence work on its canal.

Waco—Cotton Compress.—Contract has been let for the erection of a cotton compress for the Bessonne Compress Co. The plant will cost about \$40,000.

Waxahachie—Mining.—A company has been organized by J. M. Patterson (president), J. K. Patterson, T. A. Edwards (secretary) and O. B. Sims for general mining operations.

VIRGINIA.

Berkley—Iron Works.—Warren & Langley are equipping iron works.

Clifton Forge—Car Works.—A plant for the manufacture of car-wheels and car-trucks will be established.

Hampton—Saw Mill.—The Hampton Lumber Co. will put in a new band mill and repair its dry-kilns.

Iron Gate—Furnace Resuming.—The Alleghany Iron Co. has put its furnace in blast.

Marion—Lead and Zinc Mines.—The Southwest Virginia Mining Co. has been reorganized and will resume mining lead, zinc, etc.

Pulaski City—Zinc Works.—Parties are negotiating for the purchase of Mr. Thomas Jones's zinc plant with a view of organizing a smelting company for the manufacture of zinc.

Richmond—Machine Company.—The Tobacco Tagging Machine Co. has been chartered with an authorized capital of \$500,000; L. H. Lightfoot, president.

WEST VIRGINIA.

Central City—Veneer Mills.—The Central City Veneer Co. has been incorporated to cut and saw veneers and lumber of all kinds by J. H. Moore, C. B. Fontaine, J. W. Burnett, Huntington, W. Va.; Wm. Seifer, Central City, W. Va.; Alex. McClintock, Lexington, Ky.; maximum capital stock \$50,000.

BURNED.

Alto, Texas.—Boiler in Manuel Hamilton's saw mill exploded.

Forest City, La.—Meeker's saw mill and sugar-house.

Fort Smith, Ark.—The Ballman-Cammins Furniture Co.'s furniture factory damaged.

Grifton, N. C.—Robert Nelson's cotton gin.

Huntsville, Texas.—Ed Randall's cotton gin.

Jefferson City, Mo.—The G. H. Dulle Milling Co.'s flour mill and grain elevator; loss over \$100,000.

Linton, Ga.—The Washington Institute Building.

Le Compté, La.—Jos. M. Meeker's sugar refinery; loss over \$100,000.

Macon, Ga.—Buildings of S. Waxelbaum & Son, Dunlap Hardware Co., etc.; loss about \$500,000.

Pointe Coupee, La.—The Pointe Coupee Planting & Manufacturing Co.'s sugar-house plant; loss \$40,000.

Vernon, Miss.—Wm. Hoseny's grist mill and cotton gin.

Waco, Texas.—The Texas Cotton Palace; loss \$50,000.

Wallis, Texas.—N. P. Ward's cotton gin.

White City, Fla.—Morris & Cornell's saw mill.

BUILDING NOTES.

Atlanta, Ga.—The Cotton States & International Exposition Co. intends to build in the grounds over "Clara Meer" a decorative concrete arch 150 feet long. Plans from Mr. Fr. von Emperger, of New York, are under consideration.

Baltimore, Md.—Church.—The Trinity English Lutheran Church expects to erect a new structure. Address Rev. E. E. Ide.

Baltimore, Md.—Dwellings.—Chas. E. Spaulding, Equitable Building, has prepared plans for thirty-five three-story dwellings to cost \$100,000; will have electric fixtures, furnace heat and improved ventilating system.

Baltimore, Md.—Temple.—Plans are wanted for a \$75,000 Hebrew temple, to have steam heat and ventilation system. Address M. S. Levy, 40 South Paca street.

Baltimore, Md.—Dwellings.—Thomas F. Locke will build fifty dwellings costing from \$3000 to \$3500, and seven dwellings costing \$5000 to \$8000.

Beaumont, Texas—Jail.—E. T. Herner's plans for the new \$19,000 jail have been accepted.

Beaumont, Texas—Temple.—The Masonic Temple, with \$20,000 capital stock, has filed a charter. C. W. Thompson, W. W. Cunningham and W. S. Davidson are the incorporators.

Bridgeport, Ala.—School.—The stockholders of the proposed new Vanderbilt School are preparing to contract for buildings. Address E. L. Lee, J. H. Anderson et al., committee.

Charlotte, N. C.—Residence.—Jno. W. Hunt is preparing to erect a dwelling to cost \$10,000, to have steam or furnace heat.

Crandall, Texas—Storehouse.—Prichett & Ledbetter are building a storehouse 22x40 feet.

Kansas City, Mo.—Hospital, etc.—Plans will be prepared for a \$15,000 workhouse and a \$15,000 addition to hospital. Address the superintendent of buildings.

Knoxville, Tenn.—Church.—Craig Street Methodist congregation will probably build a church. Address Dr. Webber, pastor.

La Follette, Tenn.—Hotel.—The La Follette Land & Improvement Co., 54 Wall street, New York, contemplates building a large hotel at the new town of La Follette, Tenn. It is reported that George F. Barber & Co., of Knoxville, Tenn., will be the architects.

Louisville, Ky.—Residence.—Fred Erhart has prepared plans for a \$5000 residence to have steam heating, etc.

Louisville, Ky.—Store, etc.—Fred Erhart has prepared plans for a three-story store to cost \$8000; will have electric bells and lighting, steam heating, etc.

Macon, Ga.—J. C. McBurney, Mrs. J. T. Coleman and Mrs. S. S. Dunlap will each erect a handsome three-story building.

Memphis, Tenn.—Asylum.—The trustees of the building fund of St. Peter's Orphan Asylum intend to erect new asylum at a cost of \$25,000. John K. Speed is chairman.

Mt. Sterling, Ky.—Store.—M. Monroe will erect three-story store building to cost \$6000, to have freight elevator, etc.; plans prepared.

New Smyrna, Fla.—D. P. Smith will build a two-story brick house.

Oxford, Md.—Hotel.—The Isle of Avon Improvement Co. intends to build a hotel on the Isle of Avon. Address Edwin M. Wilmer, Baltimore.

Riverside, Fla.—Hotel.—The Florida Land & Mortgage Bank, Limited, of Jacksonville, can be addressed for information regarding the \$500,000 hotel already noted.

Rockdale, Texas—City Hall.—The city council has adopted the plans of O. A. Watson for the new city hall to cost \$7000.

Ruston, La.—School.—Plans and specifications for the proposed industrial-school building are completed. Contracts will be let next month.

St. Joseph, Mo.—Hotel.—Charles Nowland has received contract for the building of a hotel to cost \$250,000.

St. Louis, Mo.—Dwelling.—C. C. Newberry will erect a \$5000 dwelling.

St. Louis, Mo.—Dwellings.—W. H. Gummersell will build six dwellings to cost \$20,000.

St. Louis, Mo.—Dwellings, etc.—B. W. Clark will build a \$5000 dwelling; John Hill, an \$8000 dwelling; C. H. Tyler, a \$25,000 dwelling; T. D. Russell,

a \$15,000 dwelling; H. Bucklin, a \$6000 dwelling; J. M. Gummersell, a \$20,000 dwelling; plans all prepared.

St. Louis, Mo.—Clubhouse.—Shepley, Rutan & Coolidge have prepared plans for a clubhouse to cost \$25,000; will have boiler and passenger elevator.

St. Louis, Mo.—Flats, etc.—B. J. Otto will build a \$10,000 flat building; Wm. H. Hartley, a \$6000 flat and store building; Thos. Burke, a \$6000 flat building; Kuntz & Jantzen, a \$5000 residence and shop, and John Gleason, a \$14,000 flat building.

Troy, Ala.—School.—The city is about to issue bonds for its proposed school building. Address the mayor.

Waco, Texas—Palace.—The Texas Cotton Palace will be rebuilt.

Washington, D. C.—Store.—G. Hartig, Jr., has permit to build a \$3500 brick store.

Willis, Texas—Warehouse.—Smith & Eddler will build a tobacco warehouse.

RAILROAD CONSTRUCTION.

Railroads.

Amarillo, Texas.—Work has begun on the proposed road from Roswell, N. M., to Amarillo. Surveys have been completed.

Beaumont, Texas.—It is reported that the Gulf, Beaumont & Kansas City will secure the roadbed of the Gulf & Interstate, graded from Beaumont to Point Bolivar, on Galveston bay, and will build their line upon it to tidewater. John H. Kirby is president.

Buckhannon, W. Va.—President J. H. Hanson, of the Point Pleasant, Buckhannon & Tygart's Valley, advises the MANUFACTURERS' RECORD that the entire road is to be 200 miles long, and that the company expects to complete it in 1896. John A. Crislip has been elected vice-president; William Post, treasurer, and W. G. S. Totten, secretary.

Columbia, S. C.—Surveyors are at work on what is reported to be a route by which the Florida Central & Peninsular will have an independent line into the city from Cayce's Station. At present the Florida Central & Peninsular trains use the Southern Railway terminals. H. R. Duval, 32 Nassau street, New York, is president, and D. E. Maxwell, Jacksonville, Fla., general manager. The extension would include a large steel bridge.

Dallas, Texas.—President W. C. Connor, of the Dallas Terminal Railway Co., writes the MANUFACTURERS' RECORD that the line will be thirty miles total length, part of the distance being double track. A bond issue of \$500,000 will be made. No contracts have been let as yet.

Darien, Ga.—The Darien & Western road is expected to be completed by February 15.

Fredericksburg, Va.—A project has developed in connection with the proposed Fredericksburg & Lancaster road to build an east and west line across Virginia through Harrisonburg, Va., to the Charleston, Clendennin & Sutton road, now building in West Virginia. The entire system would reach from the Ohio river to Chesapeake bay. The International Company, 280 Broadway, New York, is interested.

Galveston, Texas.—F. P. Nichols, C. Van Sickle and W. S. Jones are among the incorporators of the Port Bolivar, Galveston & Virginia Point Railroad Co. with \$500,000 capital. They propose to construct terminal facilities at Virginia Point and Port Bolivar and build a railroad creosote bridge across Galveston bay.

Houston, Texas.—The La Porte, Houston & Northern Company is endeavoring to secure legislative authority to purchase the N. R. Galveston, Houston & Kansas City and the Houston Belt & Magnolia Park road. The North Galveston road will be completed to connect with the La Porte road.

Knoxville, Tenn.—The Knoxville, Cumberland Gap & Louisville will erect several bridges on its line. Clarence Cary, 59 Wall street, New York, is receiver.

Selmer, Tenn.—The town of Selmer will take \$10,000 in stock of the Selmer & Tennessee River line, projected from Selmer, on the Mobile & Ohio, to the Tennessee river. E. S. Cheatham, at Memphis, is interested. The distance is sixteen miles.

Velasco, Texas.—The idea of building a railroad to Velasco by way of Brehm and Bryan is being agitated.

Weatherford, Texas.—The directors of the Weatherford, Mineral Wells & Northwestern Railroad, completed between Weatherford and Mineral Wells, twenty six miles, it is stated, have decided to extend it to Graham and Fort Worth. L. M. Fouts, at Weatherford, is president.

Electric Railways.

Baltimore, Md.—The City & Suburban Company may build a trolley line along Eager street in Northeast Baltimore. Nelson Perin is president.

Birmingham, Ala.—C. A. Avery, of the company which has bought the Highland Avenue & Belt steam dummy line, states that eventually it is to be rebuilt for locomotives and electric motors.

Corlana, Texas.—The city is considering a proposition made through J. A. Townsend to build an electric street railway.

Ellicott City, Md.—It is stated that arrangements are being made to extend the Edmondson Avenue, Catonsville & Ellicott City line to Ellicott City. The line is contracted for to a point within two miles of Ellicott City. Hon. John Hubner, of Baltimore, is interested.

Grafton, W. Va.—Baltimore parties, it is reported, are considering a project to build about fifty miles of electric line to connect about ten towns in that section of the State.

Little Rock, Ark.—It is stated that the General Electric Co., of Chicago, will endeavor to secure the Capital & City Electric road and spend about \$75,000 in improvements and extensions. B. E. Sunny is local representative of the Chicago company.

Memphis, Tenn.—The Raleigh Springs Electric Railway Co. will extend its electric line to Raleigh Inn. Gene al Manager Jones may be addressed.

New Orleans, La.—The St. Charles Street Railway Co. has opened bids for construction and supplies for its electric line.

Port Tampa, Fla.—Edward R. Gunby and A. H. Hayden are among the incorporators of the Port Tampa Street Railway Co., which intends building twelve miles of electric line in Tampa and Port Tampa.

Queenstown, Md.—It is now proposed to extend the electric railroad projected from Queenstown to Denton and Chestertown across the Eastern Shore of Maryland to Lewes and Rehoboth, Del. Wm. H. Bosley, of Baltimore, and Wilmer Emory, of Centerville, are interested.

Rome, Ga.—Eastern parties have become interested in the City Electric Railway Co., and will construct several switches and add two motor cars to its equipment. J. B. Marvin is manager.

Washington, D. C.—The Eckington & Soldiers' Home Railway Co. has decided to use the electromagnet system of motive power on a section of its route. W. Kelsey Schoepf is general manager.

Washington, D. C.—The Washington & Maryland Railway Co. is endeavoring to secure a franchise for a line in the District to connect with a Baltimore road. W. Kelsey Schoepf is interested. He is manager of the Eckington & Soldiers' Home line.

MACHINERY WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Boiler.—The Searcy Manufacturing Co., Searcy, Ark., will want a 100 horse-power boiler.

Boiler and Engine.—J. I. D. Woodruff, Dickson, Tenn., wants an eighty horse-power engine and 120 horse-power boiler, new or second-hand.

Boiler and Engine.—A. S. Connelley, Eastland, Texas, will need an engine, and possibly a boiler also.

Boiler and Engine.—H. E. Rohn, 163 South Water street, Chicago, Ill., is in the market for a 100 horse-power boiler and engine.

Boiler, Engine and Motor.—The A. J. Showalter Co., Dalton, Ga., is in the market for a seven horse-power engine and ten horse-power horizontal boiler, or a seven horse-power motor of some description that is economical and reliable in its operation.

Boiler and Stack.—The Yoakum Improvement Co., Yoakum, Texas, wants bids on a horizontal return tubular boiler, sixteen feet long, sixty inches diameter, to develop 100 horse-power at ninety pounds pressure, single sheet top and bottom; stack sixty feet high No. 10 iron, double-gaged.

Bolts and Hinges.—C. N. Meriwether, Clarksville, Tenn., wants to correspond with manufacturers of bolts and gate hinges.

Broom Machinery.—The Farmers' Alliance, Lampasas, Texas, wants to correspond with manufacturers of broom machinery. Address A. F. Baker, secretary.

Cars.—The Tatum O'Neal Lumber Co., Bonhomie, Miss., needs standard-gage logging cars.

Corn and Meal Mill.—The Palmetto Milling & Commission Co., Columbia, S. C., wants machinery for preparing corn for milling on buhr stones and bolting meal; capacity wanted, 600 bushels daily.

Cotton Gin.—G. W. Searcy, Glasgow, Ala., wants outfit of three gins.

Cotton-roping Machinery.—Ira J. Davis, Marion, Ala., wants to correspond with manufacturers of cotton-roping machinery.

Creamery Outfit.—Outfit for creamery will probably be wanted at Experiment, Ga. Address H. J. Wing.

Drill Press and Borer.—The Cameron-Barkley Co., Charleston, S. C., wants prices on new or second-hand drill press and boring machine combined, with spindle large enough to bore a three-and-a-half-inch hole.

Drilling Machinery.—A. O. Jackson, Berry Station, Ala., wants diamond drill and drop-auger for boring for coal.

Dynamo.—Zouck & Stern, 318 North Front street, Baltimore, Md., wants a small plating dynamo.

Dynamo.—Wanted, a 600 to 1000-light incandescent dynamo. Address L. E. Gellerstedt, chairman fire and water committee, Troy, Ala.

Electric Lamps.—See "exhauster" below.

Electric Motor.—S. P. Maury, San Antonio Club, San Antonio, Texas, wants bids on an electric motor to haul an 80,000-pound car over a 2 per cent. grade and as sharp a curve as a standard car will run around; to be used on a standard gage railroad.

Engine.—Wanted for cash, a 125 to 150 horse-power compound condensing engine (Corliss, new or second hand). Address L. E. Gellerstedt, chairman fire and water committee, Troy, Ala.

Excavating Tools.—H. S. Urban, Richmond, Va., wants prices on shovels, picks, scrapers, scoops and other excavating tools.

Exhauster, Electric Lamps, etc.—The Athens Gas & Electric Lighting Co., Athens, Ga., is in the market for one six or eight inch gas exhauster, either new or second-hand, without engine; six or eight double carbon arc lamps, Thomson-Houston make, for 10 ampere circuit; machinery or chemical processes to utilize the ammoniacal liquor from gas works.

Fertilizer Machinery.—The American Fertilizer Co., Macon, Ga., will want in the summer machinery for mixing dry fertilizer material.

Flour Mill.—H. W. Hoon, Forest City, N. C., wants equipment for roller flour mill.

Flour Mill.—Jno. G. Hazelrigg, Moorefield, Ark., wants to correspond with flour-mill builders.

Foundry.—The Searcy Manufacturing Co., Searcy, Ark., will want equipment for foundry.

Furniture Machinery.—J. R. Rust, Jr., Bridge-water, N. C., wants to correspond with manufacturers of furniture machinery.

Gas Motors.—M. H. Crump, Bowling Green, Ky., wants information on gas motors for street railways.

Grinding Machinery.—Geo. E. Chapman, Dunlow, W. Va., wants machinery for grinding tanbark.

Grist Mill.—G. W. Searcy, Glasgow, Ala., wants grist-mill outfit.

Grist Mill.—The Palmetto Milling & Commission Co., Columbia, S. C., wants machinery for manufacturing fifty barrels of grits daily.

Ice Machinery.—The Yoakum Improvement Co., Yoakum, Texas, wants bids on complete new set of steam coils and ammonia coils for five-ton ice plant; filters and oil traps included.

Ice Machinery, etc.—The city of New Orleans, La., may possibly buy refrigerating box, with machine and dynamo attachments, for the morgue. Address Coroner Lawrason.

Iron and Steel Supplies, etc.—H. G. Hall, Blackburg, S. C., wants one-half, five eights, three-quarter polished steel shafts in short lengths, cast-steel oil hardened spiral springs, set screws, bolts, workers, etc.; also galvanized-iron pipe and fittings, wire, awning blocks, soldering irons, fruit cans, etc.

Lathe.—Zouck & Stern, 318 North Front street, Baltimore, Md., wants small screw-cutting engine lathe.

Lathes.—Frank A. Jones, 167 Wooster street, New York, N. Y., wants to buy two or three second-hand lathes in good order.

Machine Shop.—The Searcy Manufacturing Co., Searcy, Ark., will want machinery for machine shop.

Machine Tools.—The Donaldsonville Foundry and Machine Works, Donaldsonville, La., wants second-hand lathe 36 to 44-inch swing, lathe 16 to 22-inch swing, drill 28 to 36-inch swing.

Metal Laths.—The Southeastern L'ne & Cement Co., Charleston, S. C., wants delivered prices on metal lathing, small and large quantities.

Molder.—The Goldsboro Furniture Manufacturing Co., Goldsboro, N. C., is in the market for a nine-inch four-sided molder, second-hand.

Pipe.—Wanted, 100 tons cast-iron water pipe Address L. E. Gellerstedt, chairman fire and water committee, Troy, Ala.

Piping.—J. C. Lackey, Fair Bluff, N. C., wants to correspond with manufacturers of copper piping.

Planer, etc.—H. E. Rohn, 163 South Water street, Chicago, Ill., is in the market for a planer and matcher.

Power Plant.—The American Fertilizer Co., Macon, Ga., will want power plant in the summer.

Printing Press.—Wanted, a second-hand seven-column printing press. Address the Gazette Magnolia, Miss.

Pumps and Rams.—Charles Root, Winchester, Tenn., wants to correspond with manufacturers of hydraulic rams and force pumps.

Railroad Equipment.—Steel rails, sixty or sixty-five pounds, new or relaying, with splice bars bolts, spikes, frogs, etc., will be wanted; also one or two locomotives, four feet eight and a half inches, and construction cars. Address L. P. Featherston, Galveston, Texas, and E. E. Carpenter, Topeka, Kans.

Rolls.—The Bailey-Lebby Co., Charleston, S. C., wants to buy about five miles of good second-hand 30 to 50-pound rails for relaying, with fastenings.

Rolls and Rolling Stock.—J. C. Burleigh, Avon Park, Fla., may possibly be in the market for rails and rolling stock.

Roofing.—G. W. Searcy, Glasgow, Ala., wants iron roofing for space of 35x80 feet.

Roofing.—The American Fertilizer Co., Macon, Ga., will want roofing in the summer.

Saw Mill.—Amos J. Hodges, Woodville, Texas, has not yet bought all of the machinery for his saw mill.

Saw Mill.—J. C. Foster, Clarksville, Texas, wants mill for sawing fire-wood.

Saw Mill.—H. E. Rohn, 163 South Water street, Chicago, Ill., is in the market for a small or medium size saw mill, new or second hand; band mill preferred, but circular mill will do.

Shoe Machinery.—J. M. Middleton, Abbeville, Ga., wants a machine for putting bottoms on shoes after the manner of hand sewed shoes.

Snuff Machinery.—C. I. Branan, Atlanta, Ga., wants to correspond with manufacturers of machinery for making snuff.

Steam Launch.—M. S. Mahon, Port Lavaca, Texas, wants a steam launch fifty to sixty feet long, ten or twelve feet wide, and not to draw over three feet of water.

Street-railway Motors.—See "gas motors."

Tank.—See "wind-mill."

Telephone Equipment.—The Lumberton & Columbia Telephone Co., Lumberton, Miss., will want equipment and wire for thirty-two miles of telephone.

Telephone Equipment.—W. D. Arthur, Union, S. C., wants prices on complete telephone equipment for fifty to 100 subscribers.

Water Works.—The Quincy Water Works Co., Quincy, Fla., will open bids on January 31 for the construction of water works.

Water Works.—Equipment for small water works will be wanted at Princess Anne, Md. Address Thos. H. Bock, committee.

Water-works Equipment.—Jno. T. Howard, Quincy, Fla., wants to correspond with manufacturers of cast-iron pipe, pumps, steel towers, tanks, hydrants, valves, etc.

Well Drilling.—The town of Mount Pleasant, S. C., desires correspondence with a view of having a 100-foot artesian well bored. Address T. H. J. Williams, intendant.

Wind-mill and Tank.—Wm. Gomm, Albion, Fla., is in the market for a wind mill and tank.

Wire, etc.—The Mt. Washington Electric Light & Power Co., Towson, Md., will be in the market for a considerable amount of copper wire, insulated, poles, etc.

Woodworking Machinery.—The Searcy Manufacturing Co., Searcy, Ark., will want sash and door machinery.

Woodworking Machinery.—C. C. Perdue, Parsonsburg, Md., wants machinery for manufacturing washboards of wood and zinc.

Woodworking Machinery.—B. P. Thornhill & Co., Lynchburg, Va., want wood planers, panel raiser, blind-stile borer and mortiser, blind-slat tenoner, etc.; second hand.

Woodworking Machinery.—C. F. Finch, Wilson, N. C., wants machine for dressing lumber twenty inches wide and five inches thick, etc.

Woodworking Machinery.—Mr. Van Dyke, Sunny Side, Ga., wants machinery for manufacturing tubs.

Woodworking Machinery.—The G. P. Dowling Hardware Co., Ozark, Ala., wants prices on handle and spoke machinery.

Woodworking Machinery.—Wm. E. Worth, Wilmington, N. C., wants prices on machinery for making wooden boxes, both plain and mortised corners.

McKnight Bros., of Hallettsville, Texas, will buy seats and scenery for theatre.

Ira S. Furch, of Darlington, S. C., will want to buy flavoring extracts for tobacco factory.

The Carolina Fruit & Produce Co., Charleston S. C., wants iceboxes, ice tools, egg crates chicken coops, scales, etc.

Mr. Geo. E. Chapman, of Dunlow, W. Va., wants a market for ground tanbark.

Mr. Paul Simpson, of Glenn Springs, S. C., wants to place a large order for furniture.

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"Pennsylvania Limited" Connection to St. Louis.	
Beginning Sunday, January 20, a new connection will be established for the "Pennsylvania Limited" to and from St. Louis, arriving at St. Louis, westbound, 3.00 P. M., and leaving St. Louis, eastbound, 1.00 P. M. A through sleeping-car will be placed in service on this train between New York and St. Louis. Connection of this train with parlor-car to Harrisburg leaves Baltimore 11.40 A. M. daily. Train No. 20 will be changed to leave St. Louis 8.10 A. M. and Cincinnati 4.30 P. M.; train No. 8 will be changed to leave St. Louis 8.40 A. M., and arrive at Pittsburgh 6.25 A. M. (central time). The sleeping-car now running on trains Nos. 21 and 20, between New York and Indianapolis, will be withdrawn.	

